AV-32820

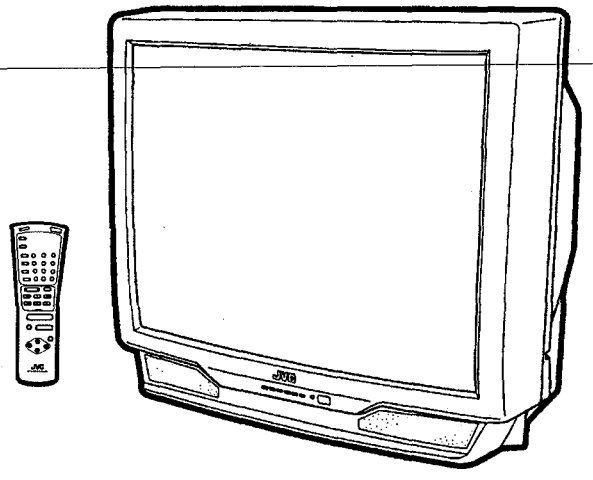
JVC

SERVICE MANUAL

COLOUR TELEVISION

BASIC CHASSIS
FK

AV-32820[PHILIPPINES]



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No. 51263
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SPECIFICATIONS

Item	Contents
Dimensions (W×H×D)	768mm×667mm×547mm 30-1/4" ×26-1/4" ×21-1/2"
Mass	51.0 kg 112.5 lbs
Reception Format	NTSC, BTSC System (Multi Channel Sound)
Reception Range (Receiving Frequency) VL Band VH Band UHF Band	 54MHz ～ 88MHz 174MHz ～ 216MHz 470MHz ～ 806MHz
CATV Frequency	(54MHz ～ 804MHz)
Closed Caption System	C1, C2, F1, F2 Available
Intermediate Frequency Video IF Carrier Sound IF Carrier	 45.75MHz 41.25MHz (4.5MHz)
Color Sub Carrier	3.58MHz
Power Input Power Consumption	120V AC, 60Hz 135W (US) ／ 1.8A (CA)
Picture Tube Screen Size High Voltage	 33inch, Measured Diagonally, Full aquare 31kV ±1.3kV (at zero beam current)
Surround System	Build in HYPER SURROUND system
Audio Power Output	3W + 3W
External Input Video Input Audio Input	 1Vp-p, 75Ω 500mVrms (-4dBs), High impedance
S-Video Input	Y : 1Vp-p positive, 75Ω (Negative sync provided) C : 0.286Vp-p (burst signal), 75Ω
Audio Output (Variable/Fix : Selectable)	More than 0 to 1550mVrms (+6dBs), Low impedance (400 Hz when modulated 100%)
Speakers Antenna Input Impedance	2" ×4-3/4", 5cm × 12cm Oval Type × 2 75Ω (VHF/UHF) Terminal, F-Type Connector
Remote Control Unit	RM-C747-1C

Design & specification subject to change without notice

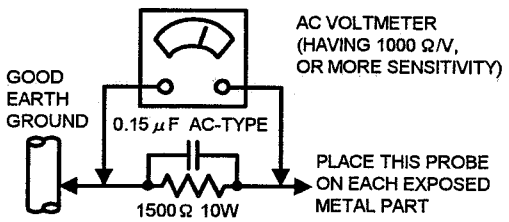
SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
(. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

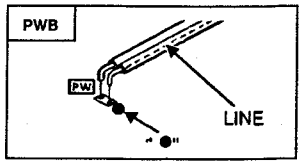
● Alternate Check Method
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit"**.

This mark shows a fast operating fuse, the letters indicated below show the rating.

POWER CORD
REPLACEMENT WARNING.
Connecting the line side of power card to " ●"mark side.

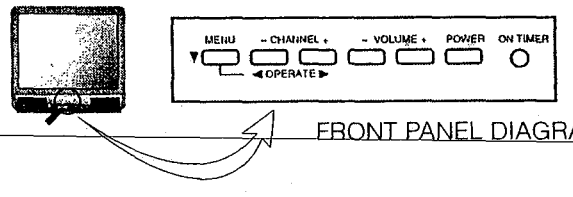


FEATURES

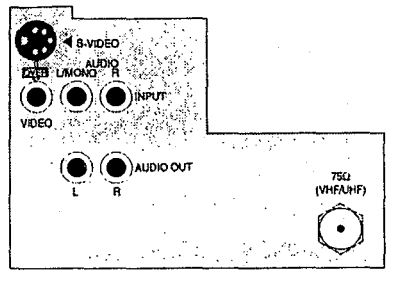
- New chassis design enables use of single board with simplified circuitry.
- Comb filter improved picture quality.
- Full-square CRT reproduces fine textured picture in every detail.
- PLL synthesizer system for channel tuning.
- TELETEXT broadcast can be viewed.
- With AUDIO, VIDEO input terminal.
- By the sound multiplex broadcast with MTS system, you can enjoy music programs and sporting events with live realism.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Variable audio output terminal.
- I^2C bus control utilities single chip ICs.
- By selecting the THEATER STATUS picture, you can enjoy pictures with powerful effects.
- The HYPER-SURROUND system makes a reproduction of the acoustic effects in a theater with strong appeal.

FUNCTIONS

FRONT AND REAR PANEL DIAGRAMS

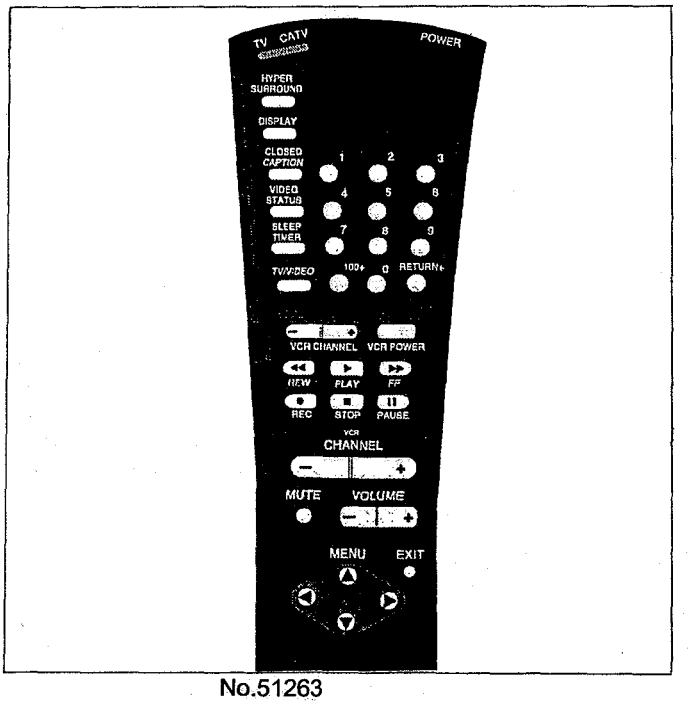


FRONT PANEL DIAGRAM



REAR PANEL DIAGRAM

REMOTE CONTROLS [RM-C747-1C]



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SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY PROCEDURE

REMOVING THE REAR COVER

1. Unplug the power supply cord.
2. Remove the 11 screws marked **A** as shown in Fig.2.
3. Remove the rear cover toward you.

When reinstalling the rear cover, carefully push it inward after inserting the chassis into the rear cover groove.

REMOVING THE CHASSIS

After removing the rear cover.

1. Slightly raise the both sides of the chassis by hand and remove the 2 claws under the both sides of the chassis from the front cabinet.
2. Draw the chassis backward along the rail in the arrow direction marked **B** as shown in the Fig.2.
   (If necessary, take off the wire clamp, connectors etc.)

When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT SOCKET PWB and the MAIN PWB.

REMOVING THE FRONT CONTROL PW BOARD

• After removing the rear cover and chassis.

1. Remove the 2 screws marked **D** as shown in Fig.2.
2. Remove the FRONT CONTROL PW BOARD toward you.

REMOVING THE AV TERMINAL BOARD

• After removing the rear cover.

1. Remove the 2 screws marked **E** as shown in Fig.2.
2. After removing the claw marked **F** in the direction of arrow mark as shown in Fig.1.
3. When you pull out the AV TERMINAL BOARD in the direction of arrow marked **G** as shown in Fig.1, it can be removed.

4. Thus the connector should be securely inserted when the AV TERMINAL BOARD is installed again.

CHECKING THE MAIN PW BOARD

1. To check the back side of the MAIN PW Board.
   1) Pull out the chassis. (Refer to REMOVING THE CHASSIS).
   2) Erect the chassis vertically so that you can easily check the back side of the MAIN PW Board.

[CAUTION]

- When erecting the chassis, be careful so that there will be no contacting with other PWB.
- Before turning on power, make sure that the wire connector, CRT earth wire and other connectors properly connected.

WIRE CLAMPING AND CABLE TYING

1. Be sure to clamp the wire.
2. Never remove the cable tie used for tying the wires together. Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

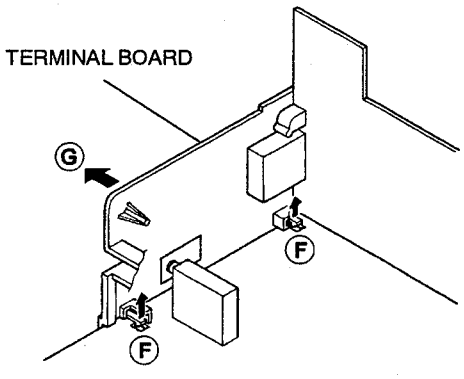


Fig. 1

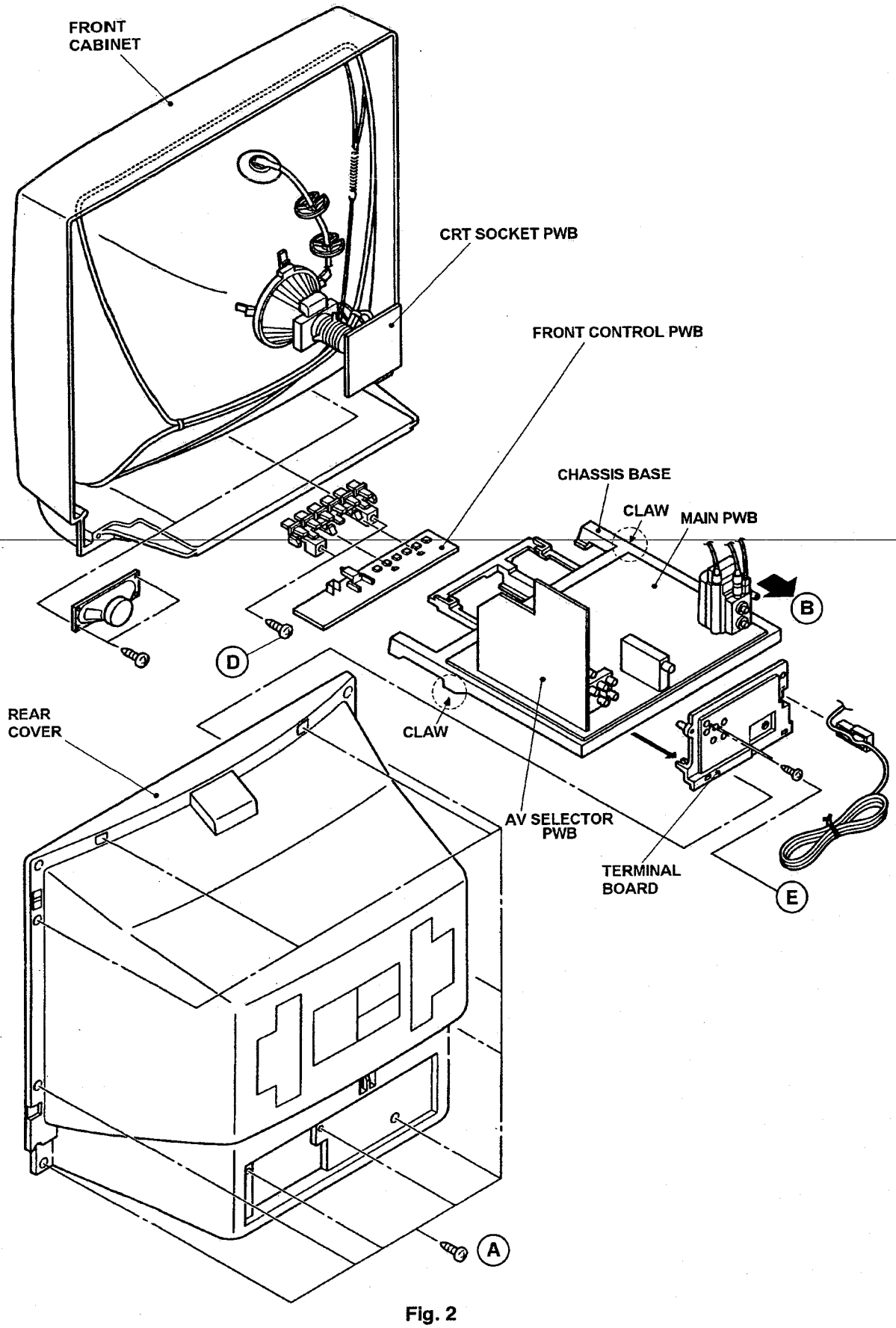

FRONT CABINET
CRT SOCKET PWB
FRONT CONTROL PWB
CHASSIS BASE
CLAW
MAIN PWB
B
D
REAR COVER
CLAW
AV SELECTOR PWB
TERMINAL BOARD
E
A

Fig. 2

REMOVING THE CRT

* Replacement of the CRT should be performed by 2 or more persons.
- After removing the cover, chassis etc..,

1. Putting the CRT change table on soft cloth, the CRT change table should also be covered with such soft cloth (shown in Fig.3).
2. While keeping the surface of CRT down, mount the TV set on the CRT change table balanced will as shown in Fig.4.
3. Remove 4 screws marked by arrows with a box type screw driver as shown in Fig.4.

- Since the cabinet will drop when screws have been removed, be sure to support the cabinet with hands.

4. After 4 screws have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.5.

- The CRT should be assembled according to the opposite sequence of its dismounting steps.

* The CRT change table should preferably be smaller that the CRT surface, and its height be about 35cm.

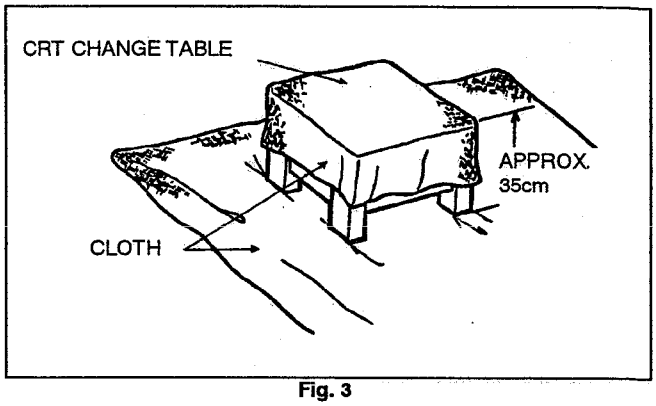


Fig. 3

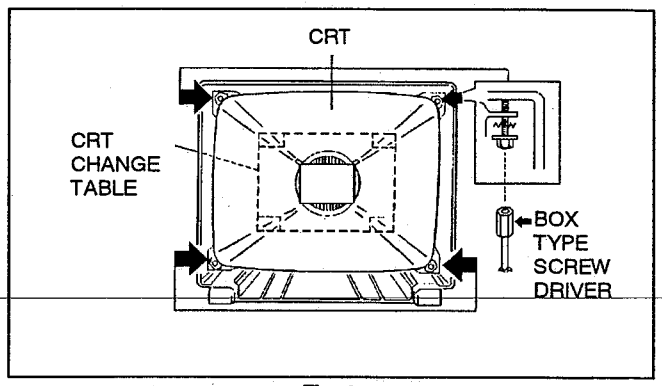


Fig. 4

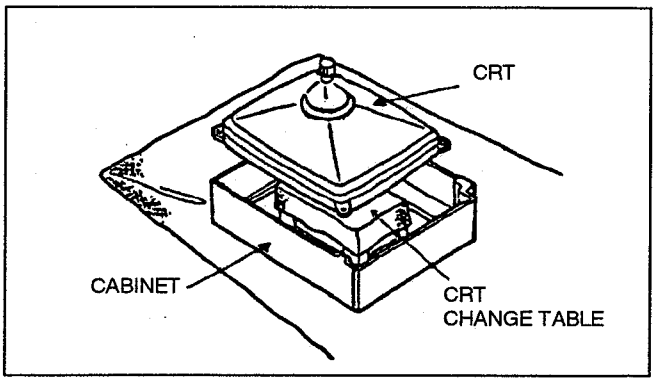


Fig. 5

COATING OF SILICON GREASE FOR ELECTRICAL INSULATION ON THE CRT ANODE CAP SECTION.

- Subsequent to replacement of the CRT and HV transformer or repair of the anode cap, etc. by dismounting them, be sure to coat silicon grease for electrical insulation as shown in Fig.6.
  Wipe around the anode button with clean and dry cloth. (Fig.6)
  Coat silicon grease on the section around the anode button. At this time, take care so that any silicon greases dose not stick to the anode button. (Fig.7)

★ **Silicon grease product No. KS - 650N**

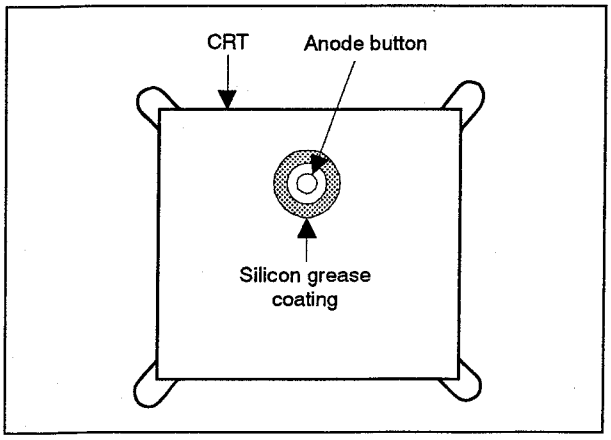


Fig. 6

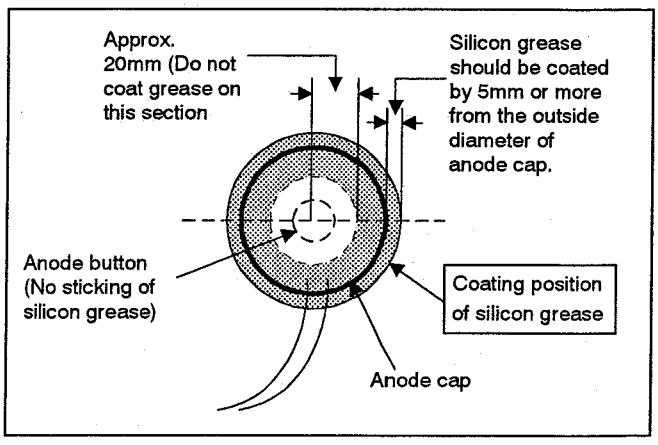


Fig. 7

MEMORY IC REPLACEMENT

1. Memory IC

This model use a memory (EEP-ROM) IC.
The memory IC stores data for proper operation of video and deflection circuits.
When replacing, be sure to use an IC containing this (initial value) data.

2. Memory IC replacement procedure

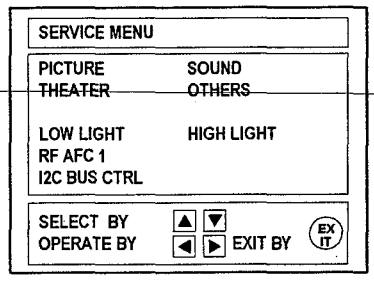
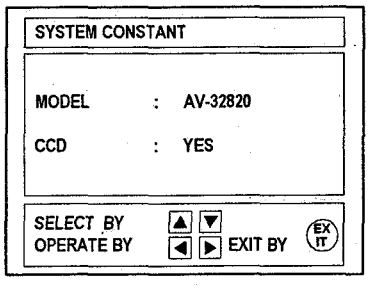
PROCEDURE	SCREEN DISPLAY
(1) **Power off** Switch off the power and disconnect the power cord from the outlet.	
(2) **Replace the memory IC.** Be sure to use memory ICs written with the initial data values.	
(3) **Power on** Connect the power cord to the outlet and switch on the power.	
(4) **System constant check and setting** 1) Simultaneously press the DISPLAY key and VIDEO STATUS key of the remote control unit. 2) The SERVICE MENU screen of Fig.1 is displayed. 3) While the SERVICE MENU is displayed, again simultaneously press the DISPLAY and VIDEO STATUS keys to display the Fig.2 SYSTEM CONSTANT screen. 4) Refer to the SYSTEM CONSTANT table and check the setting items. Where these differ, select the setting item with the MENU UP / DOWN key and adjust the setting with the MENU LEFT / RIGHT keys. (The letters of the selected item are displayed in yellow.) 5) After adjusting, release the MENU LEFT / RIGHT key to store the setting value. 6) Press the EXIT key twice to return the normal screen.	 Fig.1  Fig.2
(5) **Receive channel setting** Refer to the OPERATING INSTRUCTIONS (USER' S GUIDE) and set the receive channels (Channels Preset) as described.	
(6) **User settings** Check the user setting items according to Table 2. Where these do not agree, refer to the OPERATING INSTRUCTIONS (USER' S GUIDE) and set the items as described.	
(7) **SERVICE MENU setting** Verify what to set in the SERVICE MENU, and set whatever is necessary. (Fig.1) refer to the SERVISE ADJUSTMENT for setting.	

TABLE 1 (System Constant setting)

Setting item	Setting constant	Setting value
MODEL	AV-27850 → AV-27870 → AV-32820 AV-32850 → AV-32870 → AV-36850 AV-36870 → SEARS 32V	AV-32820
CCD	YES → NO	YES

TABLE 2 (User setting)

Setting item	Setting value	Setting item	Setting value
1. Use remote controller keys			
POWER	OFF	DISPLAY	OFF
CHANNEL	CH-02	VIDEO STATUS	STANDARD
VOLUME	Proper sound volume	SLEEP TIMER	00
TV/VIDEO	TV		
CLOSED CAPTION	OFF(CC1/T1)		
HYPER SURROUND	OFF		
2. Settings from MENU			
TINT	CENTER	TV SPEAKER	ON
COLOR	CENTER	AUDIO OUT	FIX
PICTURE	CENTER	LANGUAGE	ENG
BRIGHT	CENTER	CLOSED CAPTION	CAPTION : CC1
DETAIL	CENTER		TEXT : T1
NOTCH	OFF	AUTO TUNER SET UP	OTHERS
NOISE MUTE	ON		
SET VIDEO STATUS	ALL CENTER	CHANNEL SUMMARY	Set optionally Stations 02 – CBS 04 – NBC 07 – ABC
BASS	CENTER		
TREBLE	CENTER		
BALANCE	CENTER	TUNER MODE	AIR
MTS	STEREO	ANTENNA	INPUT A
SET CLOCK	Unnecessary to set		
ON/OFF TIMER	NO		
SET LOCK CODE	Unnecessary to set		

SERVICE ADJUSTMENTS

ADJUSTMENT PREPARATION:

1. **You can make the necessary adjustments for this unit with either the remote control unit or with the adjustment equipment and parts as before.**
2. **Adjustment with the remote control unit is made on the basis of the initial setting values, however, the new setting values which set the screen to its optimum condition may differ from the initial settings.**
3. Turn on the power for the set and test equipment before use, and start the adjustment procedures after waiting at least 30 minutes.
4. Make sure that AC power is turned on correctly.
5. Unless otherwise specified, prepare the most suitable reception or input signal for adjustment.
6. Never touch any adjustment parts which are not specified in the list for this adjustment-variable resistors, transformers, condensers, etc.
7. Presetting before adjustment.
   Unless otherwise specified in the adjustment instructions, preset the following functions with the remote control unit.

VIDEO STATUS	STANDARD
NOTCH	OFF
HYPER SURROUND	OFF
BASS, TREBLE, BALANCE	CENTER

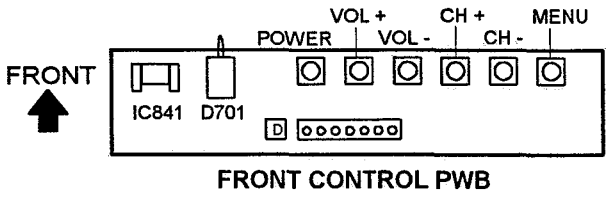
ADJUSTMENT EQUIPMENT

1. DC voltmeter(or digital voltmeter)
2. Oscilloscope
3. Signal generator (Pattern generator) [NTSC]
4. Remote control unit
5. TV audio multiplex signal generator
6. Frequency counter

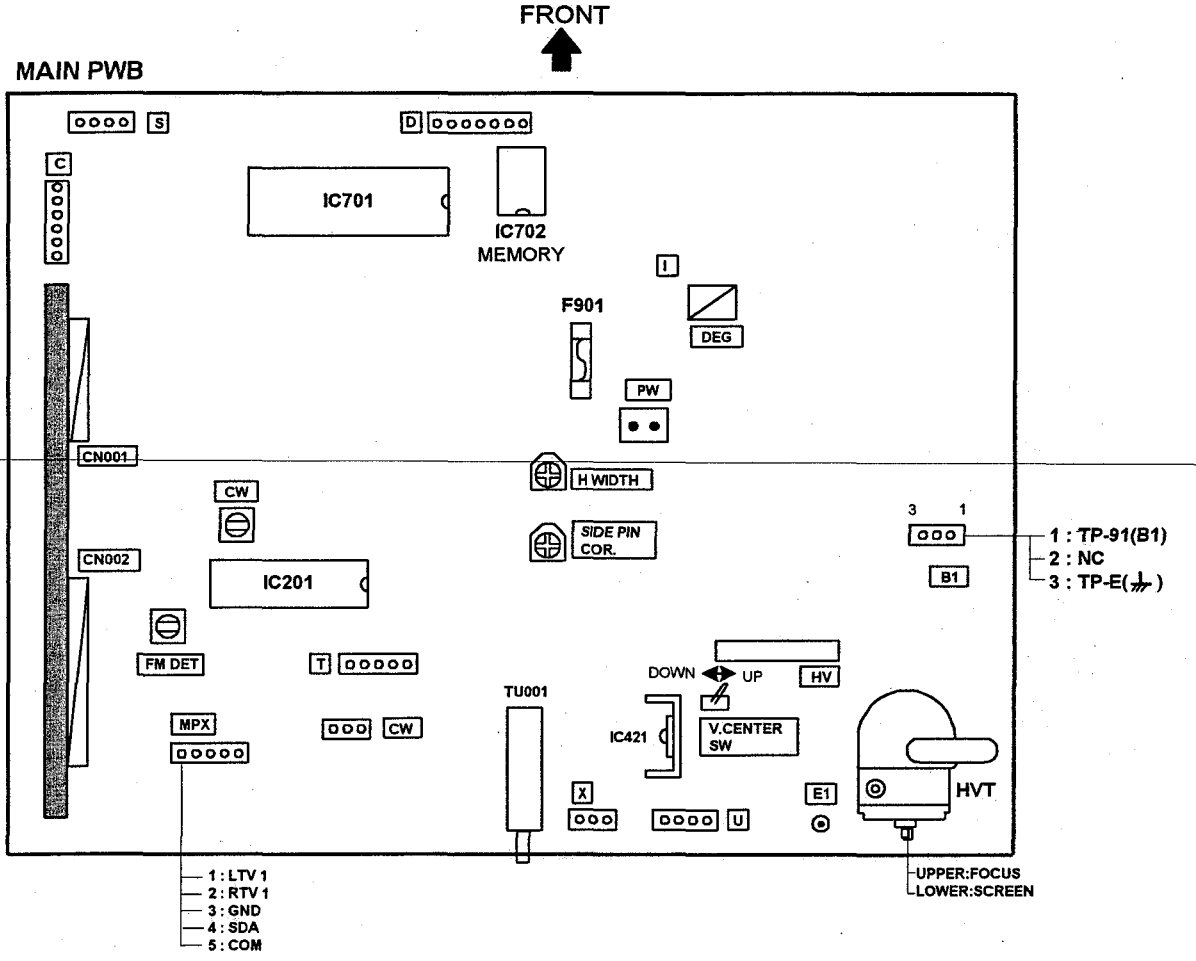
ADJUSTMENT ITEMS

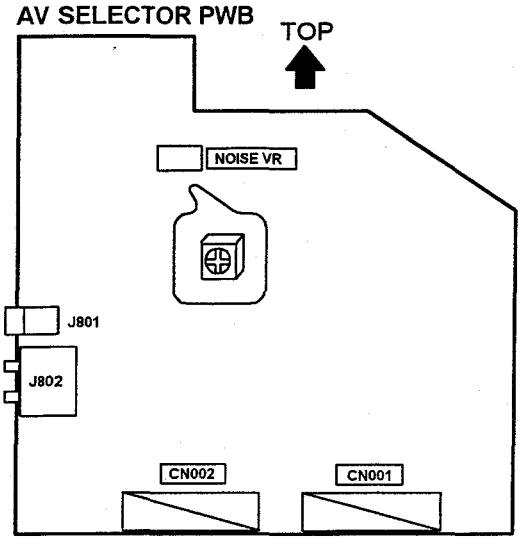
- ●B1 Voltage check
- ●IF VCO adjustment
- ●RF AGC adjustment
- ●FOCUS adjustment
- ●DEFLECTION adjustment
  - V. CENTER, V. SIZE, V. POSITION adjustment
  - H. WIDTH, SIDEPIN CORRECT, H. POSITION adjustment
- ●VIDEO / CHROMA adjustment
  - WHITE BALANCE (Low light) adjustment
  - WHITE BALANCE (High light) adjustment
  - SUB BRIGHT adjustment
  - SUB CONTRAST adjustment
  - SUB COLOR adjustment
  - SUB TINT adjustment
- ●MTS circuit adjustment
  - INPUT LEVEL adjustment
  - STEREO adjustment
  - SAP VCO adjustment
  - FILTER check
  - SEPARATION adjustment
- ●PURITY, CONVERGENCE adjustment

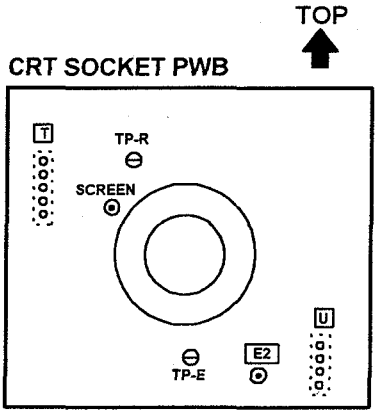
ADJUSTMENT LOCATONS



FRONT CONTROL PWB







BASIC OPERATION OF SERVICE MENU

1. Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

2. In general, 10 basic setting(adjustments) items or verifications are performed in the SERVICE MENU.

(1) PICTURE ····· This sets the setting values (adjustment values) of the VIDEO/CHROMA and DEFLECTION circuits.
(2) SOUND ····· This sets the setting values (adjustment values) of the AUDIO circuit.
(3) THEATER ····· This is used when the THEATER MODE is adjusted.
(4) OTHERS ····· This sets the setting values (adjustment values) of the OTHERS circuit.
(5) LOW LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
(6) HIGH LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
(7) RF AFC 1 ····· This is used when the IF VCO is adjusted.
(8) I²C BUS CTRL ····· This is used when ON/OFF of the I²C BUS CTRL is set [Do not adjust about this item].

3. Basic Operations of the SERVICE MENU

(1) How to enter the SERVICE MENU.

Press the DISPLAY key and VIDEO STATUS key of the remote control unit at the same time to enter the SERVICE MENU screen ① shown in figure page later.

(2) SERVICE MENU screen selection

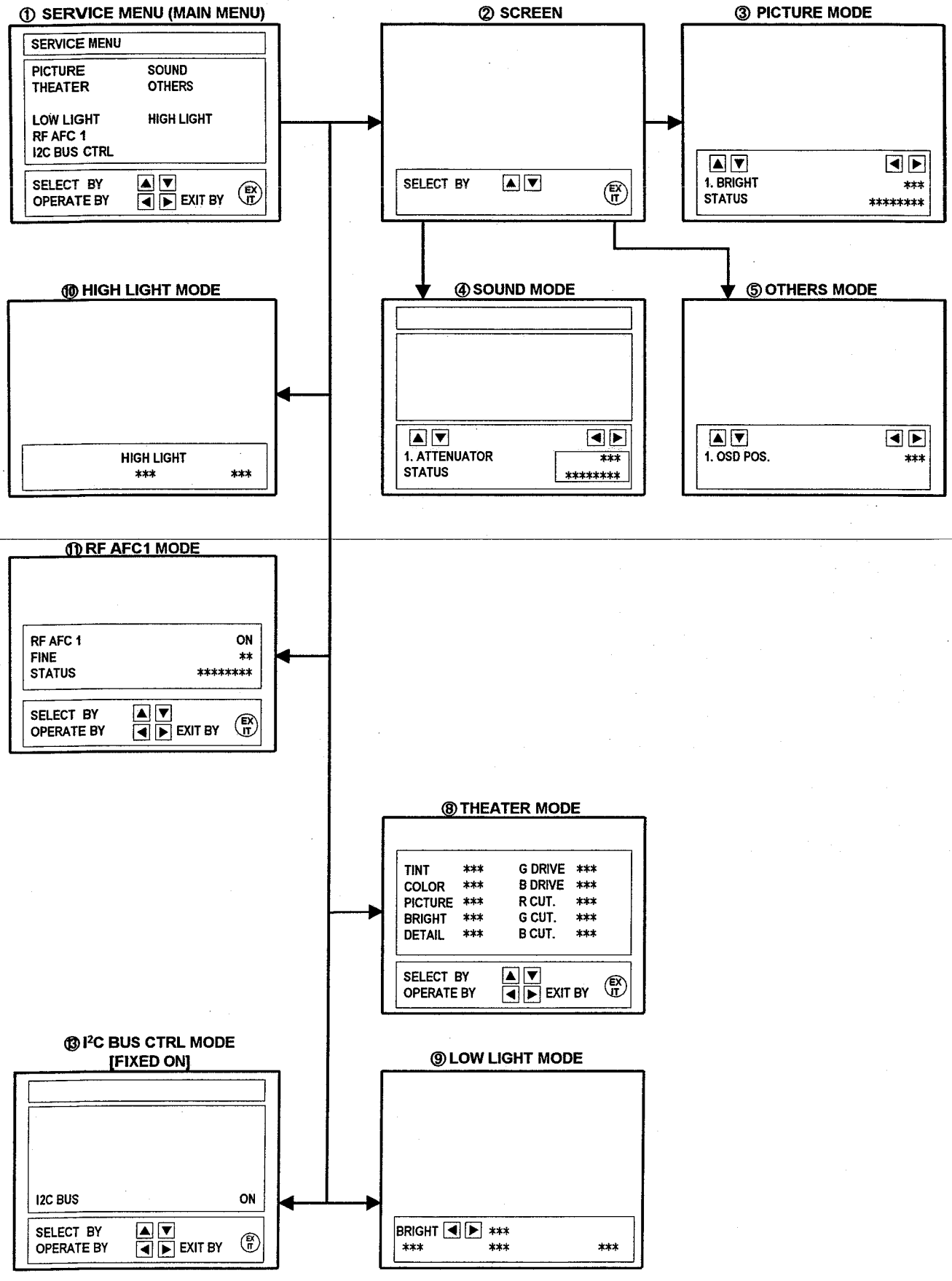
Press the UP / DOWN key of the MENU to select any of the following items.
(The letters of the selected items are displayed in yellow.)

- PICTURE
- SOUND
- THEATER
- OTHERS
- LOW LIGHT
- HIGH LIGHT
- RF AFC 1
- I²C BUS CTRL

(3) Enter the any setting (adjustment) mode

- **PICTURE, SOUND and OTHERS mode**
  1) If select any of PICTURE, SOUND or OTHERS items, and the LEFT / RIGHT key is pressed from SERVICE MENU (MAIN MENU), the screen ②will be displayed as shown in figure page later.
  2) Then the UP / DOWN key is pressed, the PICTURE mode screen ③ or the SOUND mode screen ④ or the OTHERS mode screen ⑤is displayed, and the PICTURE, SOUND or OTHERS setting can be performed.

- **THEATER, LOW LIGHT, HIGH LIGHT, RF AFC1, and I²C BUS CTRL mode**
  1) If select any of THEATER / LOW LIGHT / HIGH LIGHT / RF AFC 1 / I2C BUS CTRL items, and the LEFT / RIGHT key is pressed from SERVICE MENU (MAIN MENU), the screens ⑧⑨⑩⑪⑫⑬ will be displayed as shown in figure page later.
  2) Then the settings or verifications can be performed.

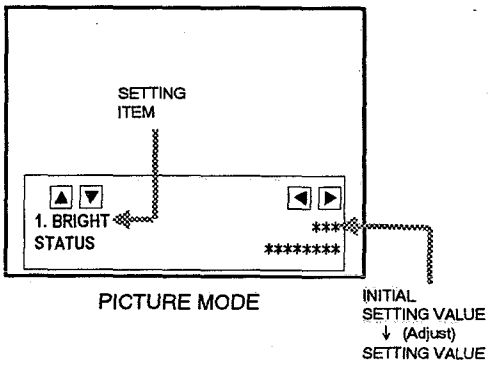

① SERVICE MENU (MAIN MENU)
SERVICE MENU
PICTURE
SOUND
THEATER
OTHERS
LOW LIGHT
HIGH LIGHT
RF AFC 1
I2C BUS CTRL
SELECT BY
OPERATE BY
EXIT BY
EXIT
② SCREEN
SELECT BY
EXIT
③ PICTURE MODE
1. BRIGHT
***
STATUS
****
④ SOUND MODE
1. ATTENUATOR
***
STATUS
****
⑤ OTHERS MODE
1. OSD POS.
***
⑩ HIGH LIGHT MODE
HIGH LIGHT
***
***
⑪ RF AFC1 MODE
RF AFC 1
ON
FINE
**
STATUS
****
SELECT BY
OPERATE BY
EXIT BY
EXIT
⑧ THEATER MODE
TINT
***
G DRIVE
***
COLOR
***
B DRIVE
***
PICTURE
***
R CUT.
***
BRIGHT
***
G CUT.
***
DETAIL
***
B CUT.
***
SELECT BY
OPERATE BY
EXIT BY
EXIT
⑬ I²C BUS CTRL MODE
[FIXED ON]
I2C BUS
ON
SELECT BY
OPERATE BY
EXIT BY
EXIT
⑨ LOW LIGHT MODE
BRIGHT
***
***
***
***

(3) Setting method

1) UP / DOWN key of the MENU
   Select the item.

2) LEFT / RIGHT key of the MENU
   Setting(adjust) the value of the items.
   When the key is released the setting value will be stored (memorized).

3) EXIT key
   Returns to the previous screen.



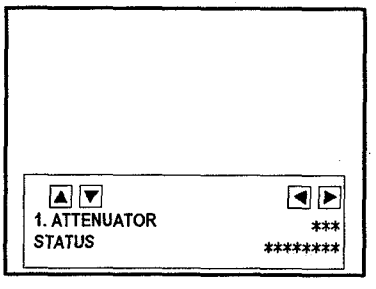
PICTURE MODE

(4) Releasing SERVICE MENU

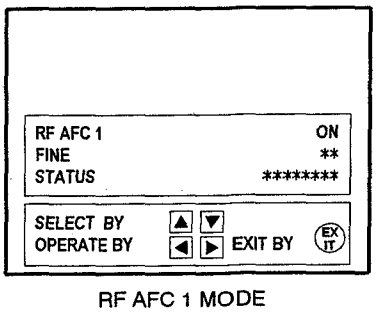
1) After returning to the SERVICE MENU upon completion of the setting (adjustment) work, press the EXIT key again.

★ The settings for LOW LIGHT and HIGH LIGHT are described in the WHITE BALANCE page of ADJUSTMENT.

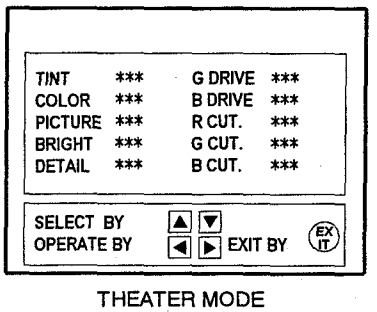
★ The setting for RF AFC 1 are described in the IF VCO page of ADJUSTMENT.



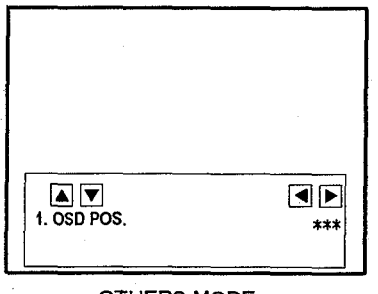
SOUND MODE



RF AFC 1 MODE



THEATER MODE



OTHERS MODE

INITIAL SETTING VALUE OF SERVICE MENU

1. **Adjustment of the SERVICE MENU is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.**
2. **Do not change the initial Setting Values of the Setting (Adjustment) items not listed In "ADJUSTMENT".**

● PICTURE MODE

No.	Setting (Adjustment) item	Variable range	Initial setting value
1.	BRIGHT	0~127	64
2.	PICTURE	0~127	75
3.	WPS (WHITE PEAK SUPPRESSOR)	0 / 1	1
4.	TV DETAIL	0~63	38
5.	TV BPF (TV B.P.FILTER)	0 / 1	1
6.	TINT	0~127	56
7.	COLOR	0~127	64
8.	EXT BRIGHT	±25	-1
9.	EXT PICT.	±25	0
10.	EXT DETAIL	0~63	38
11.	EXT BPF (EXT B.P.FILTER)	0 / 1	1
12.	EXT TINT	±25	+7
13.	EXT COLOR	±25	+2
14.	V SIZE	0~63	30
15.	V CENTER	0~7	0
16.	H POSITION	0~31	24
17.	H AFC	0 / 1	0
18.	BLANKING	0 / 1	0
19.	RF AGC	0~63	35
20.	PIF VCO	0~127	64

● SOUND MODE

No.	Setting (Adjustment) item	Variable range	Initial setting value
1.	ATTENUATOR	0~63	50
2.	BALANCE	0~63	32
3.	NOISE DET.	0 / 1	1
4.	IN LEVEL (INPUT LEVEL)	0~63	25
5.	FH MONITOR	0 / 1	0
6.	STEREO VCC	0~63	23
7.	PILOT CAN. (PILOT CANCELER)	0 / 1	0
8.	FILTER	0~63	30
9.	LOW SEP. (LOW SEPARATION)	0~63	35
10.	HI SEP. (HI SEPARATION)	0~63	17
11.	5FH MON. (5FH MONITOR)	0 / 1	0
12.	SAP VCO	0~63	28
13.	IN GAIN (INPUT GAIN)	0 / 1	0
14.	FIL.OFFSET	0~10	0

● THEATER MODE

Setting (Adjustment) item	Variable range	Initial setting value
TINT	±20	±00
COLOR	±20	-2
PICTURE	±20	-15
BRIGHT	±20	±00
DETAIL	±15	-3
G DRIVE	-80~+50	-25
B DRIVE	-80~+50	-72
R CUT. (R CUTOFF)	±10	±00
G CUT (G CUTOFF)	±10	±00
B CUT (B CUTOFF)	±10	±00

● OTHERS MODE

No.	Setting (Adjustment) item	Variable range	Initial setting value
1.	OSD POS.	0 ~ 7	0
2.	CCD POS. (CLOSED CAPTION DECODER POS.)	0 ~ 15	5
3.	EOSEL	0 / 1	1
4.	F1-FIELD	0 / 1	1
5.	F1-LINE21	0 ~ 15	8
6.	F2-LINE21	0 ~ 15	8
7.	OSD STABI	1 / 0	0
8.	LOCK DET.	1 / 0	0
9.	MENU COLOR	-30 ~ 0	-10
10.	MENU PICT	-30 ~ 0	-12
11.	MENU BRI	-30 ~ 0	-12

● LOW LIGHT MODE

Setting (Adjustment) item	Variable range	Initial setting value
R CUTOFF	0 ~ 255	20
G CUTOFF	0 ~ 255	20
B CUTOFF	0 ~ 255	20

● HIGH LIGHT MODE

Setting (Adjustment) item	Variable range	Initial setting value
G DRIVE	0 ~ 255	128
B DRIVE	0 ~ 255	128

● RF AFC 1 MODE

Setting (Adjustment) item	Variable range	Initial setting value
RF AFC 1	ON / OFF	ON
FINE	-77 ~ +77	±00

● I²C BUS CTRL MODE

Setting (Adjustment) item	Variable range	Initial setting value
I²C BUS	ON/OFF	Fixed on

REPLACEMENT OF CHIP COMPONENT

■ CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

■ SOLDERING IRON

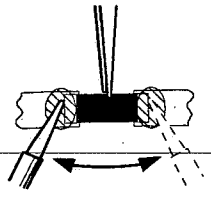
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■ REPLACEMENT STEPS

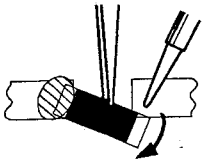
1. How to remove Chip parts

◆ **Resistors, capacitors, etc.**

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

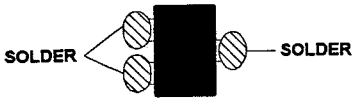


(2) Shift with tweezers and remove the chip part.

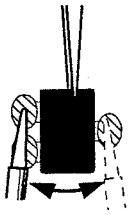


◆ **Transistors, diodes, variable resistors, etc.**

(1) Apply extra solder to each lead.



(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

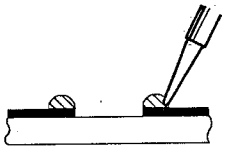


Note : After removing the part, remove remaining solder from the pattern.

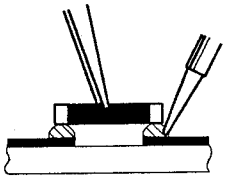
2. How to install Chip parts

◆ **Resistors, capacitors, etc.**

(1) Apply solder to the pattern as indicated in the figure.



(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

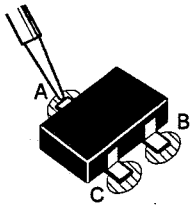


◆ **Transistors, diodes, variable resistors, etc.**

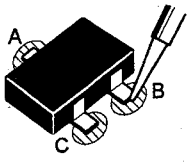
(1) Apply solder to the pattern as indicated in the figure.

(2) Grasp the chip part with tweezers and place it on the solder.

(3) First solder lead **A** as indicated in the figure.



(4) Then solder leads **B** and **C**.



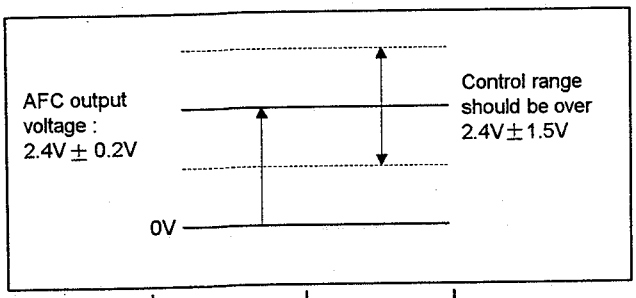
■ ADJUSTMENTS

B1 VOLTAGE CHECK

Item	Measuring instrument	Test point	Adjustment item	Description
B1 Voltage check	DC Voltmeter	B1 (B1 Connector 1 pin) (TP-91) TP-E(⏚) (B1 Connector 3 pin)		1. Input a black and white signal (color off). 2. Connect the DC voltmeter to B1 connector 1 pin (TP-91) and TP-E(⏚) (B1 connector 3 pin). 3. Confirm that the voltage is DC134V±2V.

ADJUSTMENT OF IF VCO

Item	Measuring instrument	Test point	Adjustment item	Description
IF VCO adjustment	Oscilloscope Signal generator	CW Connector 3 pin	CW TRANSF. [RF AFC 1] mode	1. Input the color bar signal. 2. Connect the oscilloscope to pin 3 of the CW connector. 3. Select the [RF AFC 1] mode of the SERVICE MENU, and set the RF AFC1 to OFF and FINE to ±00. 4. Turn CW TRANSF., verify that the AFC output voltage changes quickly between 2.4V ±1.5V and then adjust the voltage to 2.4V±0.2V. 5. Return the RF AFC to ON. 6. Cancel the SERVICE MENU and check that no irregularities are displayed on the screen. If there any irregularities, select [RF AFC 1] mode on the SERVICE MENU and verify that FINE is 00 when the AFC is ON. Repeat steps 3 to 5 if necessary.



ADJUSTMENT OF RF AGC

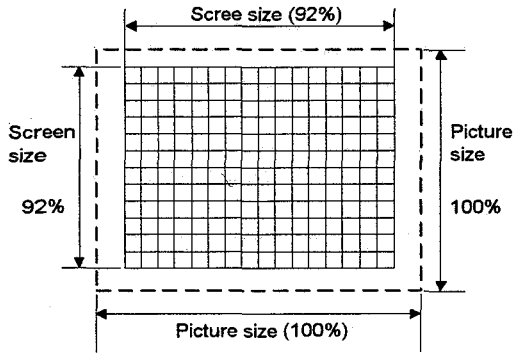
RF AGC adjustment			No.19 RF AGC	1. Receive a broadcast. 2. Select "No.19 RF AGC" of the PICTURE mode in SERVICE MENU. 3. Press the MUTE key and turn off color. 4. With the MENU LEFT key, get noise in the screen picture. (0 side of setting value) 5. Press the MENU RIGHT key and stop when noise disappears from the screen. 6. Change to other channels and make sure that there is no irregularity. 7. Press the MUTE key and get color out.

ADJUSTMENT OF FOCUS

FOCUS adjustment	Signal generator		FOCUS VR [In HVT]	1. Input a crosshatch signal. 2. While looking at the screen, adjust FOCUS VR so that the vertical and horizontal lines will be clear and in fine detail. 3. Make sure that the picture is in focus even when the screen gets darkened.

ADJUSTMENT OF DEFLECTION CIRCUIT

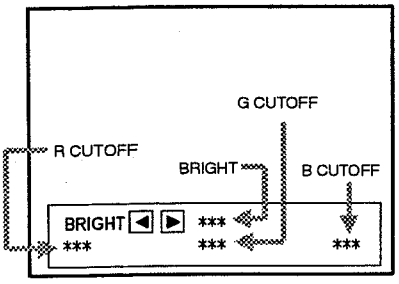
Item	Measuring instrument	Test point	Adjustment item	Description
V.CENTER V.SIZE and V.POSITION adjustment	**Signal generator**		**No.14 V SIZE** **No.15 V CENTER** **V.CENTER SW**	1. Input a crosshatch signal. 2. Confirm the "No.15 V CENTER" of the PICTURE mode is 0. 3. Adjust the vertical SCREEN size to 92% with the "No.14 V SIZE" and V.CENTER SW.
H.WIDTH, SIDEPIN CORRECT and H.POSITION adjustment	**Signal generator**		**No.16 H POSITION** **SIDEPIN CORRECT VR** **H.WIDTH VR**	1. Input a crosshatch signal. 2. Adjust the SIDEPIN CORRECT VR so that the vertical lines at both side of the crosshatch are straight. 3. Select the "No.16 H POSITION" of the PICTURE mode in SERVICE MENU. 4. Adjust the "No.16 H POSITION" until the screen will be horizontally centered. 5. Adjust the H.WIDTH VR so that 92% of the overall crosshatch is displayed on the screen. 6. As required above steps 2 and 5.

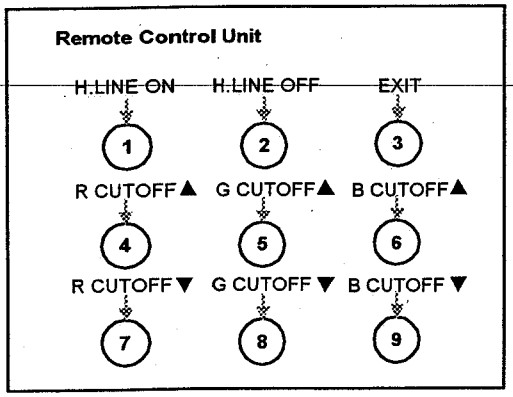


ADJUSTMENT OF VIDEO / CHROMA CIRCUIT

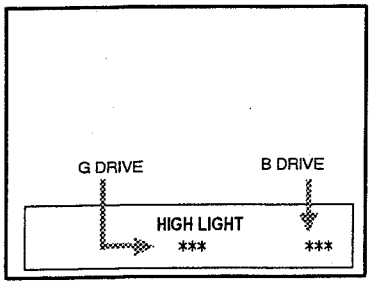
<table>
<tr><th>Item</th><th>Measuring instrument</th><th>Test point</th><th>Adjustment item</th><th>Description</th></tr>
<tr><td>WHITE BALANCE (Low Light) adjustment</td><td>Signal generator
Remote control unit</td><td></td><td>BRIGHT
R CUTOFF
G CUTOFF
B CUTOFF
SCREEN VR</td><td>1. Input a black and white signal (color off).
2. Select the LOW LIGHT mode from the SERVICE MENU.
3. Confirm the Initial setting value of "BRIGHT", "R CUTOFF", "G CUTOFF" and "B CUTOFF".
4. Display one horizontal line by pressing the ①key of the remote control unit.
5. Turn the screen VR all the way to the left.
6. Turn the screen VR gradually to the right from the left until either one of the red, blue or green colors appears slightly.
7. Adjust the two colors which did not appear until the one horizontal line that is displayed becomes white using the ④to ⑨keys of the remote control unit.
8. Turn the screen VR until the first horizontal line is displayed slightly.
9. Press the②key to return to the regular screen.</td></tr>
<tr><td>WHITE BALANCE (High Light) adjustment</td><td>Signal generator
Remote control unit</td><td></td><td>G DRIVE
B DRIVE</td><td>1. Input a black and white signal (color off).
2. Select the HIGH LIGHT mode in the SERVICE MENU.
3. Confirm the initial setting value of "G DRIVE" and "B DRIVE".
4. Adjust the screen color to white with the⑤,⑥,⑧and⑨keys of the remote control unit.</td></tr>
</table>

[LOW LIGHT] MODE





[HIGH LIGHT] MODE



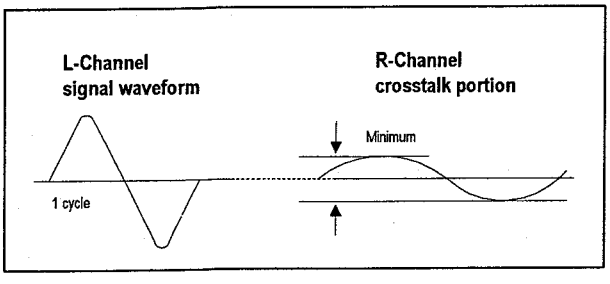
Remote Control Unit

①key : H.LINE ON
②key : H.LINE OFF
③key : EXIT
⑤key : G DRIVE ▲
⑥key : B DRIVE ▲
⑧key : G DRIVE ▼
⑨key : B DRIVE ▼

Item	Measuring instrument	Test point	Adjustment item	Description
SUB BRIGHT adjustment	**Remote control unit**		**No.1 BRIGHT**	1. Receive a broadcast. 2. Select "No.1 BRIGHT" of the PICTURE mode in SERVICE MENU. 3. Confirm the initial setting value of the "No.1 BRIGHT" . 4. If the brightness is not the best with the initial setting value, make fine adjustment of the "No.1 BRIGHT" unit you get the optimum brightness.
SUB CONTRAST adjustment	**Remote control unit**		**No.2 PICTURE**	1. Receive a broadcast. 2. Select "No.2 PICTURE" of the PICTURE mode in SERVICE MENU. 3. Confirm the initial setting value of the "No.2 PICTURE". 4. If the contrast is not the best with the initial setting value, make fine adjustment of the "No.2 PICTURE" unit you get the optimum contrast.
SUB COLOR adjustment	**Remote control unit**		**No.7 COLOR**	1. Receive a broadcast. 2. Select "No.7 COLOR" of the PICTURE mode in SERVICE MENU. 3. Confirm the initial setting value of the "No.7 COLOR". 4. If the color is not the best with the initial setting value, make fine adjustment until you get the best color.
SUB TINT adjustment	**Remote control unit**		**No. 6 TINT**	1. Input a color bar signal (full field color bar 75% white). 2. Select "No. 6 TINT" of the PICTURE mode in SERVECE MENU. 3. Confirm the initial setting value of the "No. 6 TINT". 4. If the tint is not the best with the initial setting value, make fine adjustment until you get the best tint.

ADJUSTMENT OF MTS CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
MTS INPUT LEVEL check			**No.4 IN LEVEL**	1. Select the "No.4 IN LEVEL" of the SOUND mode in SERVICE MENU. 2. Verify that the "No.4 IN LEVEL" is set at its initial setting value.
MTS STEREO VCO adjustment	**Signal generator** **Frequency counter**	**MPX Connector** **2 pin RTV1** **[MAIN PWB]**	**No.5 FH MONITER** **No.6 STEREO VCO**	1. Receive a RF signal (non modulated sound signal) from the antenna terminal. 2. Select the "No.5 FH MONITER" of SOUND mode in SERVICE MENU, change the setting value from 0 to 1. 3. Connect the frequency connector to pin 2 of MPX connector. 4. Select the "No.6 STEREO VCO". 5. Confirm the initial setting value of the "No.6 STEREO VCO". 6. Adjust the "No.6 STEREO VCO" so that the frequency counter will display 15.73kHz±0.1kHz. 7. Select the "No.5 FH MONITER" of the SOUND mode, and reset the setting value from 1 to 0.
MTS SAP VCO adjustment	**Signal generator** **Frequency counter**	**MPX Connector** **4 pin SDA** **3 pin GND** **2 pin RTV1** **[MAIN PWB]**	**No.11 5FH MON.** **No.12 SAP VCO.**	1. Receive a RF signal (non modulated sound signal) from the antenna terminal. 2. Connect between pin 4 of MPX connector and GND (pin 3 of MPX connector) through 1MΩ resistor. 3. Select the "No.11 5FH MON." of the SOUND mode in SERVICE MENU, and reset the setting value from 0 to 1. 4. Connect the frequency connector to pin 2 (R.OUT) of MPX connector. 5. Select the "No.12 SAP VCO". 6. Confirm the initial setting value of "No.12 SAP VCO". 7. Adjust the "No.12 SAP VCO" so that the frequency connector will display 78.67kHz±0.5kHz. 8. Select the "No.11 5FH MON." of the SOUND mode, and reset the setting value from 1 to 0.
MTS FILTER check			**No.8 FILTER**	1. Select the "No.8 FLTER" of the SOUND mode in SERVICE MENU. 2. Verify that the "No.8 FLTER" is set at its initial setting value.
MTS SEPARATION adjustment	**TV audio multiplex signal generator** **Oscilloscope**	**MPX Connector** **1 pin LTV1** **2 pin RTV1** **[MAIN PWB]**	**No.9 LOW SEP.** **No.10 HI SEP.**	1. Input a stereo L signal (300Hz) from the TV Audio multiplex signal generator to the antenna terminal. 2. Connect an oscilloscope to pin 1 (L.OUT) of MPX connector, and display one cycle portion of the 300Hz signal. 3. Change the connection of the oscilloscope to pin 2 (R.OUT) of MPX connector, and enlarge the voltage axis. 4. Select the "No.9 LOW SEP." of the SOUND mode in SERVICE MENU. 5. Confirm the initial setting value of the "No.9 LOW SEP.". 6. Adjust the "No.9 LOW SEP." so that the stroke element of the 300Hz signal will become minimum. 7. Change the signal to 3kHz, and similarly adjust the "No.10 HI SEP.".



HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing the high voltage hold down circuit shown in Fig. 1.
This circuit shall be checked to operate correctly.

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

(1) Turn the POWER SW ON.
(2) As shown in Fig.2, set the resistor (between [X] connector [1] & [3]).
(3) Make sure that the screen picture disappears.
(4) Temporarily unplug the power cord.
(5) Remove the resistor (between [X] connector [1] & [3]).
(6) Again plug the power cord, make sure that the normal picture is displayed on the screen.

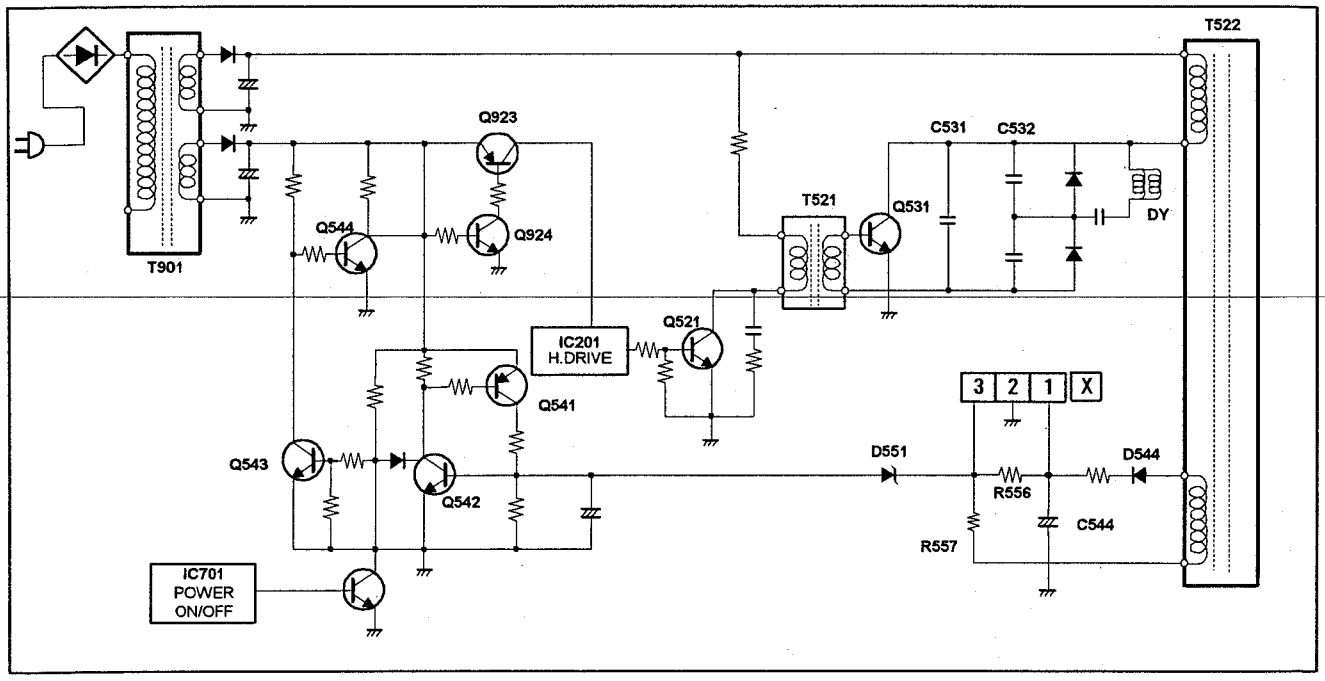


Fig. 1

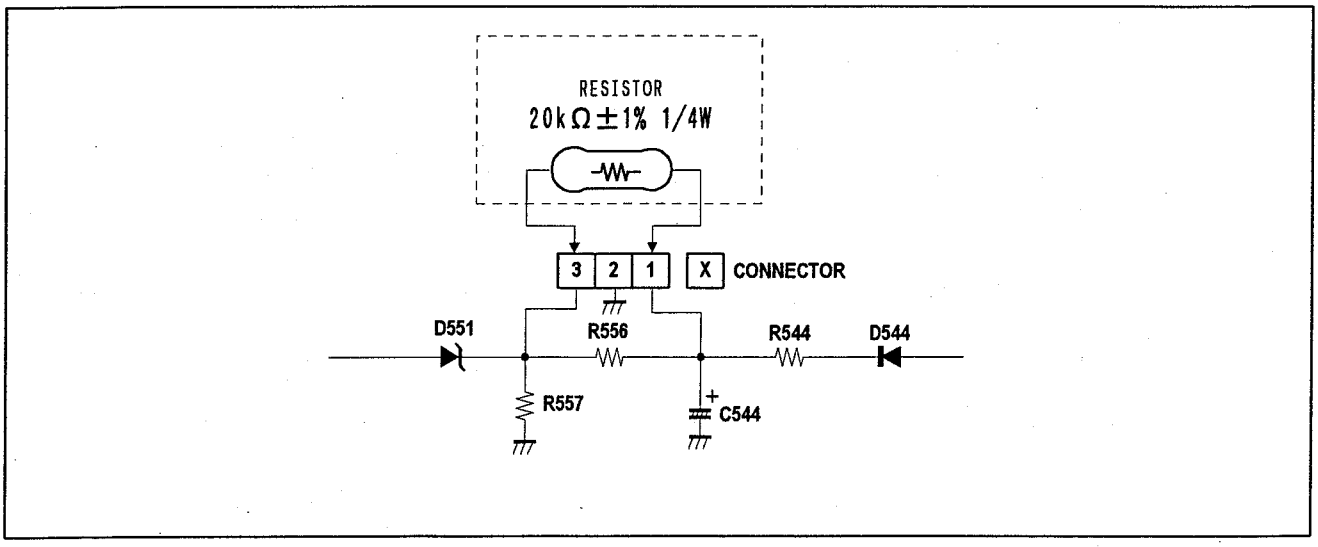


Fig.2

PARTS LIST

CAUTION

- The parts identified by the ⚠ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines —— in the Parts No. columns will not be supplied .
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied .
- As a rule, the resistors and capacitors which are indicated as shown in "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board .
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" .

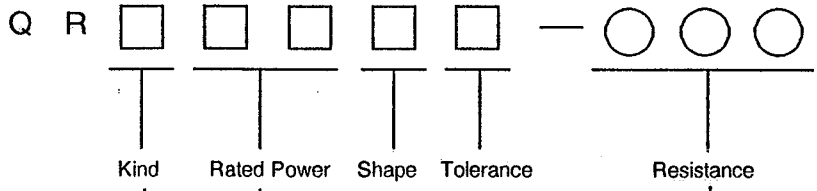
ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% - 10%	+50% - 10%	+80% - 20%	+100% - 0%

HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR



Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

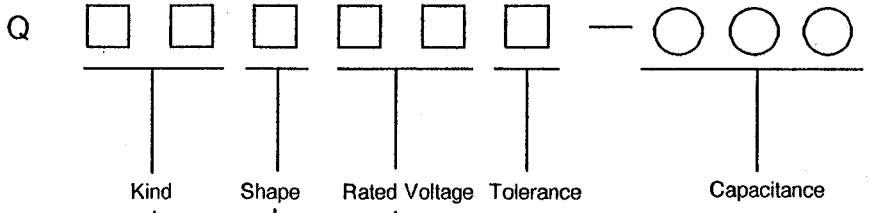
Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R"will be effective as point.

EX.

2.2 Ω = 2R2
470 Ω = 47×10^1 → 471
150kΩ = 15×10^4 → 154

■ CAPACITOR



Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

5Figure / 6Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX

5pF = 5R0
1000pF = 10×10^2 → 102
47μF = 47×10^6 → 476

Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

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- AV SELECTOR PW BOARD ASS'Y 35

■ PACKING 36
■ PACKING PARTS LIST 36

USING P.W. BOARD & REMOTE CONTROL UNIT

Model / P.W.B ASS'Y	AV-32820
MAIN P.W.B	SFK-1012A-M2
CRT SOCKET P.W.B	SFK-3002A-M2
FRONT CONTROL P.W.B	SFK-4002A-M2
AV SELECTOR P.W.B	SFK-8002A-M2
REMOTE CONTROL UNIT	RM-C747-1C

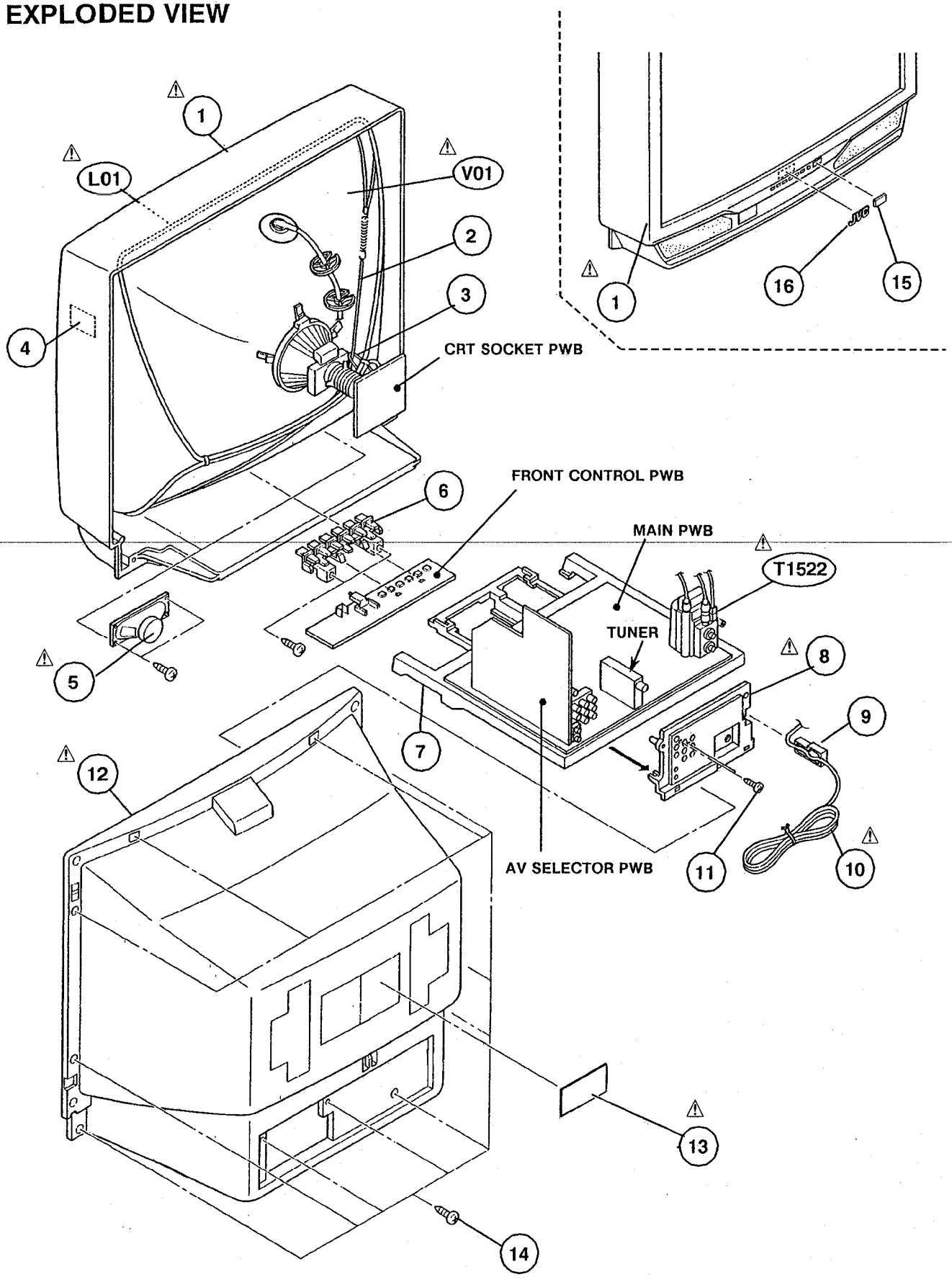
EXPLODED VIEW PARTS LIST

⚠	Ref. No.	Part No.	Part Name	Description	Local
⚠	L01	CELD066-001JA	DEG COIL		*
⚠	V01	A80LJF30X08(EW)	ITC TUBE(C)	(Inc.DY,PC,WED)	*
⚠	T1522	QQH0016-001	HVT	(With in MAIN PWB)	*
⚠	1	CM12914-C03-MA	FRONT CABINET		*
	2	CHGB0015-0E	BRAIDED WIRE		*
	3	CHGB0016-0D	BRAIDED WIRE		*
	4	CM48206-001-A	WARNING LABEL		*
⚠	5	CEBSS12D-04KJ2	SPEAKER	(×2)SP01,SP02	*
	6	CM36568-B01-VA	PUSH KNOB		*
	7	CM12689-B01-VA	CHASSIS BASE		*
⚠	8	CM23125-A02-VA	TERMINAL BOARD		*
	9	CM48140-A03-A	CORD CLAMP		*
⚠	10	QMPD070-200-JC	POWER CORD		*
	11	SBSB3010Z	TAPPING SCREW	(×2)	*
⚠	12	CM12915-D01-MA	REAR COVER		*
⚠	13	CM23034-001-A	RATING LABEL	(×2)	*
	14	GBSB4016Z	TAPPING SCREW	(×11)	*
	15	CM35983-001-H	REMOCON WINDOW		*
	16	CM48006-A03-H	JVC MARK		*

REMOTE CONTROL UNIT PARTS LIST [RM-C747-1C]

⚠	Ref.No.	Part No.	Part Name	Description	Local
		2AA015250	BATTERY COVER		*

EXPLODED VIEW



PRINTED WIRING BOARD PARTS LIST

MAIN PW BOARD ASS'Y (SFK-1012A-M2)

⚠ Symbol No.	Part No.	Part Name	Description			Local
	V A R I A B L E R E S I S T O R					
R1579	QVPE611-203HZ	V R(SIDEPIN CORRECT)	20kΩ	B		*
R1581	QVPE611-502HZ	V R(H.WIDTH)	5kΩ	B		*
	R E S I S T O R					
R1001	QRD14CJ-5R6SX	C R	5.6 Ω	1/4W	J	*
R1110	QRG029J-220A	OM R	22 Ω	2W	J	*
R1423	QRX029J-1R2A	MF R	1.2 Ω	2W	J	*
R1524	QRG029J-182A	OM R	1.8kΩ	2W	J	*
R1525	QRG029J-152A	OM R	1.5kΩ	2W	J	*
R1533	QRG039J-103A	OM R	10kΩ	3W	J	*
R1541	QRD129J-150S	C R	15 Ω	1/2W	J	*
R1542	QRX019J-1R2S	MF R	1.2 Ω	1W	J	*
R1543	QRG039J-223A	OM R	22kΩ	3W	J	*
R1544	QRD129J-4R7S	C R	4.7 Ω	1/2W	J	*
⚠ R1556	QRV141F-7501AY	MF R	7.5kΩ	1/4W	F	*
⚠ R1557	QRV141F-2491AY	MF R	2.49kΩ	1/4W	F	*
R1588	QRG039J-100A	OM R	10 Ω	3W	J	*
R1605	QRX029J-R82A	MF R	0.82 Ω	2W	J	*
R1637	NRVA02D-1502NY	MF R	15kΩ	1/10W	±0.5%	*
R1639	NRVA02D-1501NY	MF R	1.5kΩ	1/10W	±0.5%	*
R1771	QRG019J-820S	OM R	82 Ω	1W	J	*
⚠ R1901	QRF074K-R47	UNF R	0.47 Ω	7W	K	*
R1904-05	QRX029J-R22A	MF R	0.22 Ω	2W	J	*
R1923	QRX039J-1R0A	MF R	1 Ω	3W	J	*
R1924	QRG019J-331S	OM R	330 Ω	1W	J	*
R1926	QRX029J-1R0A	MF R	1 Ω	2W	J	*
R1951	QRX029J-1R2A	MF R	1.2 Ω	2W	J	*
R1952	QRX029J-1R0A	MF R	1 Ω	2W	J	*
⚠ R1998	QRZ0111-275U	C R	2.7MΩ	1/2W		*
	C A P A C I T O R					
C1006	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1011	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1102	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1104-05	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1106	NCT03CH-560AY	CHIP CAP.	56pF	50V	J	*
C1107	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1110-11	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1131	QFV71HJ-154MZ	TF CAP.	0.15μF	50V	J	*
C1132	QFN31HJ-152ZJ1	M CAP.	1500pF	50V	J	*
C1134	NCB21HK-332AY	CHIP CAP.	3300pF	50V	K	*
C1135	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1139	NCB21HK-223AY	CHIP CAP.	0.022μF	50V	K	*
C1162	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1163	NCT03CH-220AY	CHIP CAP.	22pF	50V	J	*
C1164-65	NCT03CH-470AY	CHIP CAP.	47pF	50V	J	*
C1166	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1168-70	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1205	QFV71HJ-104MZ	TF CAP.	0.1μF	50V	J	*
C1208	NCT03CH-680AY	CHIP CAP.	68pF	50V	J	*
C1226	NCT03CH-681AY	CHIP CAP.	680pF	50V	J	*
C1228	QFV71HJ-104MZ	TF CAP.	0.1μF	50V	J	*
C1301	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1302	NCT03CH-100AY	CHIP CAP.	10pF	50V	J	*
C1303	QFLC1HJ-223MZ	M CAP.	0.022μF	50V	J	*
C1402	QEE61CK-225BZ	TAN.CAP.	2.2μF	16V	K	
C1403	NCB21HK-102AY	CHIP CAP.	1000pF	50V	K	*
C1421	NCB21HK-103AY	CHIP CAP.	0.01μF	50V	K	*
C1424	QETC1VM-107Z	E CAP.	100μF	35V	M	*
C1425	QETC1VM-477Z	E CAP.	470μF	35V	M	*
C1426	QFLC2AK-563MZ	M CAP.	0.056μF	100V	K	*
C1428	QFV71HJ-684MZ	TF CAP.	0.68μF	50V	J	*

⚠	Symbol No.	Part No.	Part Name	Description			Local
	CAPACITOR						
	C1429	QFV71HJ-224MZ	TF CAP.	0.22 µ F	50V	J	*
	C1503	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1523	QETC2CM-105Z	E CAP.	1 µ F	160V	M	*
⚠	C1531	QFZ0117-3501S	MPP CAP.	3500 p F	1.4kVH	± 2.5%	*
⚠	C1532	QFZ0117-1302S	MPP CAP.	0.013 µ F	1.4kVH	± 2.5%	*
⚠	C1533	QFP32GJ-223M	PP CAP.	0.022 µ F	400V	J	*
	C1534	QEHC2EM-225MZ	E CAP.	2.2 µ F	250V	M	*
⚠	C1535	QFZ0119-754S	MPP CAP.	0.75 µ F	200V	± 3%	*
	C1538	QEZ0203-107R	E CAP.	100 µ F	160V		
	C1541	QETB2EM-226	E CAP.	22 µ F	250V	M	*
	C1542	QETB1VM-108	E CAP.	1000 µ F	35V	M	*
	C1544	QETC1VM-107Z	E CAP.	100 µ F	35V	M	*
	C1545	QFN32AJ-472ZJ1	M CAP.	4700 p F	100V	J	*
	C1546	QFV71HJ-473MZ	TF CAP.	0.047 µ F	50V	J	*
	C1573	QFLC1HJ-683MZ	M CAP.	0.068 µ F	50V	J	*
	C1574	QETC0JM-477Z	E CAP.	470 µ F	6.3V	M	*
	C1575	QFLC1HJ-683MZ	M CAP.	0.068 µ F	50V	J	*
	C1577	QETC1VM-476Z	E CAP.	47 µ F	35V	M	*
	C1578-79	QEM61HK-475MZ	E CAP.	4.7 µ F	50V	K	
	C1613	QETC1VM-476Z	E CAP.	47 µ F	35V	M	*
	C1622	QFLC1HJ-103MZ	M CAP.	0.01 µ F	50V	J	*
	C1624	QFV71HJ-104MZ	TF CAP.	0.1 µ F	50V	J	*
	C1625	QEN61HM-475Z	BP E CAP.	4.7 µ F	50V	M	*
	C1626	QEN61HM-105Z	BP E CAP.	1 µ F	50V	M	*
	C1628	QFLC1HJ-473MZ	M CAP.	0.047 µ F	50V	J	*
	C1630-31	QFV71HJ-104MZ	TF CAP.	0.1 µ F	50V	J	*
	C1633	QEE61CK-335BZ	TAN.CAP.	3.3 µ F	16V	K	
	C1634	QEE61CK-106BZ	TAN.CAP.	10 µ F	16V	K	
	C1639	QFLC1HJ-273MZ	M CAP.	0.027 µ F	50V	J	*
	C1641	QFN31HJ-222ZJ1	M CAP.	2200 p F	50V	J	*
	C1642	QFV71HJ-104MZ	TF CAP.	0.1 µ F	50V	J	*
	C1644	QFN31HJ-222ZJ1	M CAP.	2200 p F	50V	J	*
	C1645	QFV71HJ-104MZ	TF CAP.	0.1 µ F	50V	J	*
	C1651-52	QEN61HM-105Z	BP E CAP.	1 µ F	50V	M	*
	C1701-02	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1704	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1705	NCT03CH-181AY	CHIP CAP.	180 p F	50V	J	*
	C1709	NCT03CH-221AY	CHIP CAP.	220 p F	50V	J	*
	C1710-11	NCT03CH-390AY	CHIP CAP.	39 p F	50V	J	*
	C1712	NCT03CH-270AY	CHIP CAP.	27 p F	50V	J	*
	C1713	NCT03CH-150AY	CHIP CAP.	15 p F	50V	J	*
	C1714	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1716	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1717-18	NCT03CH-330AY	CHIP CAP.	33 p F	50V	J	*
	C1720-22	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1723	NCB21HK-102AY	CHIP CAP.	1000 p F	50V	K	*
	C1725	NCB21HK-102AY	CHIP CAP.	1000 p F	50V	K	*
	C1741	QFN31HJ-102ZJ1	M CAP.	1000 p F	50V	J	*
	C1743	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
	C1744	NCT03CH-681AY	CHIP CAP.	680 p F	50V	J	*
	C1772	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
⚠	C1901	QFZ9040-104N	MF CAP.	0.1 µ F	AC275V	M	*
⚠	C1902	QFZ9040-473N	MF CAP.	0.047 µ F	AC275V	M	*
⚠	C1903	QFZ9040-104N	MF CAP.	0.1 µ F	AC275V	M	*
⚠	C1904	QCZ9052-102A	C CAP.	1000 p F	AC125V		*
⚠	C1906	QCZ9033-102A	C CAP.	1000 p F	AC250V	K	*
⚠	C1907	QCZ9033-102A	C CAP.	1000 p F	AC250V	K	*
⚠	C1908	QCZ9033-102A	C CAP.	1000 p F	AC250V	K	*
⚠	C1910	QEZ0169-477	E CAP.	470 µ F	200V	M	*
	C1911	QETC1VM-477Z	E CAP.	470 µ F	35V	M	*
	C1912	QFN31HJ-102ZJ1	M CAP.	100 p F	50V	J	*
	C1913	QCZ0122-222U	C CAP.	2200 p F	2000V	K	*
	C1914	QCZ0122-391A	C CAP.	390 p F	2000V	K	*
	C1918	NCB21HK-102AY	CHIP CAP.	1000 p F	50V	K	*

⚠	Symbol No.	Part No.	Part Name	Description			Local
	CAPACITOR						
	C1919	NCB21HK-472AY	CHIP CAP.	4700 p F	50V	K	*
	C1920	QFLC1HJ-823MZ	M CAP.	0.082 μ F	50V	J	*
	C1921-23	QCZ0132-152AZ	C CAP.	1500 p F	500V	K	*
	C1924	QEZ0203-107R	E CAP.	100 μ F	160V		
	C1934	NCB21HK-102AY	CHIP CAP.	1000 p F	50V	K	*
	C1938	NCT03CH-471AY	CHIP CAP.	470 p F	50V	J	*
	C1990-91	QCZ9029-103M	C CAP.	0.01 μ FAC	125V	M	*
	TRANSFORMER						
	T1131	CELT001-209J3	C.WAVE TRANSF.				*
	T1161	CELT003-109J3	S.I.F.TRANSF.				*
	T1521	CE42034-002	H.DRIVE TRANSF.				*
⚠	T1522	QQH0016-001	H V TRANSF.				*
⚠	T1901	CETS084-001J8	S M T				*
	COIL						
	L1001	CELP059-101Z	PEAKING COIL	100 μ H			*
	L1102	CELP041-R22	PEAKING COIL	0.22 μ H			*
	L1103	CELP041-R68	PEAKING COIL	0.68 μ H			*
	L1104	CELP059-680Z	PEAKING COIL	68 μ H			*
	L1131	CELP059-220Z	PEAKING COIL	22 μ H			*
	L1161	CELP059-680Z	PEAKING COIL	68 μ H			*
	L1162	CELP059-390Z	PEAKING COIL	39 μ H			*
	L1201	CELP059-270Z	PEAKING COIL	27 μ H			*
⚠	L1531	CE41663-00B	LINEARITY COIL				*
⚠	L1532	CELC052-821	CHOKE COIL				*
⚠	L1591	CELC901-036J6	HEATER CHOKE				*
	L1701	CELP059-5R6Z	PEAKING COIL	5.6 μ H			*
	L1702	CELP058-100Z	PEAKING COIL	10 μ H			*
	L1771	CELP059-5R6Z	PEAKING COIL	5.6 μ H			*
	L1921	CELC058-820Z	CHOKE COIL				*
	L1922	CELC058-220Z	CHOKE COIL				*
	DIODE						
	D1001	MTZJ36(A)-T2	ZENER DIODE				*
	D1221	MTZJ5.1(B)-T2	ZENER DIODE				*
	D1231-34	1SS133-T2	SI.DIODE				*
	D1421	1N4003-T2	SI.DIODE				*
	D1422	MTZJ75-T2	ZENER DIODE				*
	D1511	MTZJ3.3(A)-T2	ZENER DIODE				*
⚠	D1531	RH3G-C1	SI.DIODE				*
⚠	D1532	RU3AM-LFC4	SI.DIODE				*
	D1533	RGP10J(C1)-T3	SI.DIODE				*
	D1540	MTZJ36(A)-T2	ZENER DIODE				*
	D1541	RH1S-T3	SI.DIODE				*
	D1542	RGP10J(C1)-T3	SI.DIODE				*
	D1544	1SS81-T2	SI.DIODE				*
	D1546	1SR124-400A-T2	SI.DIODE				*
	D1549	MTZJ9.1(B)-T2	ZENER DIODE				*
⚠	D1551	MTZJ7.5S-T2	ZENER DIODE				*
	D1560	1SS133-T2	SI.DIODE				*
	D1601-03	1SS133-T2	SI.DIODE				*
	D1693-94	MTZJ9.1(C)-T2	ZENER DIODE				*
	D1702-04	1SS133-T2	SI.DIODE				*
	D1741-42	1SS133-T2	SI.DIODE				*
	D1771-73	1SS133-T2	SI.DIODE				*
	D1804	MTZJ5.1(B)-T2	ZENER DIODE				*
	D1805	1SS133-T2	SI.DIODE				*
	D1810	MTZJ12(C)-T2	ZENER DIODE				*
⚠	D1901	D3SBA60-C1	BRIDGE DIODE				*
⚠	D1902	RGP10J(C1)-T3	SI.DIODE				*
	D1903-04	1SS133-T2	SI.DIODE				*
	D1909	MTZJ15(A)-T2	ZENER DIODE				*
	D1910	RGP10J(C1)-T3	SI.DIODE				*
	D1911	1SS133-T2	SI.DIODE				*
	D1912	MTZJ15(A)-T2	ZENER DIODE				*
	D1913	RGP10J(C1)-T3	SI.DIODE				*

⚠	Symbol No.	Part No.	Part Name	Description	Local
	D I O D E				
	D1921	RU30A-C1	SI.DIODE		*
	D1922	RU3YX-LFC4	SI.DIODE		*
	D1923	EGP10D-C1	SI.DIODE		
	D1926-27	1SS133-T2	SI.DIODE		*
	D1931	1SS133-T2	SI.DIODE		*
	D1933	1SS133-T2	SI.DIODE		*
	D1941	MTZJ11(A)-T2	ZENER DIODE		*
	D1951	MTZJ7.5S-T2	ZENER DIODE		*
	T R A N S I S T O R				
	Q1101	2SC5083(L-P)-T	SI.TRANSISTOR		*
	Q1131-32	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1161	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1203	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1204-05	2SA1037K(QR)-X	SI.TRANSISTOR		*
	Q1231-32	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1521	2SC4212-C1	SI.TRANSISTOR		
⚠	Q1531	2SD2539-LB	SI.TRANSISTOR	H.OUT	*
	Q1541	2SA933S(QR)-T	SI.TRANSISTOR		*
⚠	Q1542	2SC2785(JH)-T	SI.TRANSISTOR		*
	Q1543-44	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1551	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1552	2SA1037K(QR)-X	SI.TRANSISTOR		*
	Q1553	2SD1408(OY)-LB	SI.TRANSISTOR		
	Q1601	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1602	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1603	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1604	2SA1037K(QR)-X	SI.TRANSISTOR		*
	Q1671-72	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1683-86	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1701	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1741	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1742	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1743	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1911	2SA1037K(QR)-X	SI.TRANSISTOR		*
	Q1921	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1923	2SA1020(Y)-T	SI.TRANSISTOR		*
	Q1924	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1928	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1942-43	2SC2412K(QR)-X	SI.TRANSISTOR		*
	Q1944	DTC124EKA-X	DIGI.TRANSISTOR		*
	Q1951	2SA949(Y)C1-T	SI.TRANSISTOR		*
	I C				
	IC1001	KIA78L05BP-Y	I.C.(MONO-ANA)		*
	IC1101	BA17809T	I.C.(MONO-ANA)		*
	IC1201	TA1242N	I.C.(MONO-ANA)		
	IC1202	TC4066BP	I.C.(DIGI-MOS)		*
⚠	IC1421	LA7832	I C		*
⚠	IC1601	LA4485	I.C.(MONO-ANA)		*
	IC1651	UPC1851ACU	I C		
	IC1652	BA15218N	I.C.(MONO-ANA)		*
	IC1653	TC4066BP	I.C.(DIGI-MOS)		*
	IC1701	MN1874876JZX2	I.C.(MICRO-COMP)		*
	IC1702	AT24C02-32850	I.C.(EP-ROM)	(SERVICE)	*
	IC1703	MN1381-Q-Y	I.C.(MONO-ANA)		*
	IC1771	KIA78L05BP-Y	I.C.(MONO-ANA)		*
⚠	IC1901	STR-F6515	I.C.(HYBRID)		
⚠	IC1941	SE135N	I.C.(HYBRID)		
	O T H E R S				
	CF1001-02	FTP47.25MF	CERAMIC FILTER		*
	CF1131	CE41505-001	CERAMIC FILTER		*
	CF1161	SFSH4.5MCB	CERAMIC FILTER		*
	CF1501	CSB503F30-T2	CER.RESONATOR		*
	CF1701	FCR12.0M2S	CER.RESONATOR		*
⚠	F1901	QMF0007-5R0J1	FUSE	5.0A	*
	K1421	QQR0582-001Z	BEADS CORE		*

⚠	Symbol No.	Part No.	Part Name	Description	Local
	OTHERS				
	K1702	QQR0582-001Z	BEADS CORE		*
	K1901	CE41433-001Z	BEADS CORE		*
	K1903	CE41433-001Z	BEADS CORE		*
	K1921	CE41433-001Z	BEADS CORE		*
⚠	LF1901	CELF001-001J1	LINE FILTER		*
⚠	LF1902	CE42335-001J1	LINE FILTER		*
⚠	PC1901	TLP621(B)	I.C.(PH.COUPLER)		*
⚠	PC1902	TLP621(B)	I.C.(PH.COUPLER)		*
⚠	RY1901	CESK028-001	RELAY		*
	S1421	QSL6A13-C01	LEVER SWITCH	V.CENTER SW	*
	SF1101	CE42604-201	SAW FILTER		
⚠	TH1501	CEKP004-002	P.THERMISTOR		*
⚠	TH1901	CEKP007-002	P.THERMISTOR		*
⚠	TU1001	CEEY200-B01	TUNER		*
⚠	VA1901	ERZV10V361CS	VARISTOR		*
	X1301	QAX0310-001Z	X-TAL		*
	Y1201	NCB21HK-102AY	CHIP CAP.	1000pF 50V K	*

CRT SOCKET PW BOARD ASS'Y (SFK-3002A-M2)

⚠	Symbol No.	Part No.	Part Name	Description	Local
	RESISTOR				
	R3360-62	QRZ0111-152	C R	1.5kΩ 1/2W	*
	R3363-65	QRG029J-103	OM R	10kΩ 2W J	*
	CAPACITOR				
	C3354-55	NCS21HJ-331AY	CER.CAP.-M	330pF 50V J	*
	C3356	NCS21HJ-391AY	CER.CAP.-M	330pF 50V J	*
⚠	C3382	QCZ0121-102A	C CAP.	1000pF 3kV Z	*
	COIL				
	L3381	CELP055-101Z	PEAKING COIL	100μH	*
	TRANSISTOR				
	Q3351-53	2SC4544-C1	SI.TRANSISTOR		*
	OTHERS				
⚠	SK3351	CE42535-001J1	C.R.T.SOCKET		*

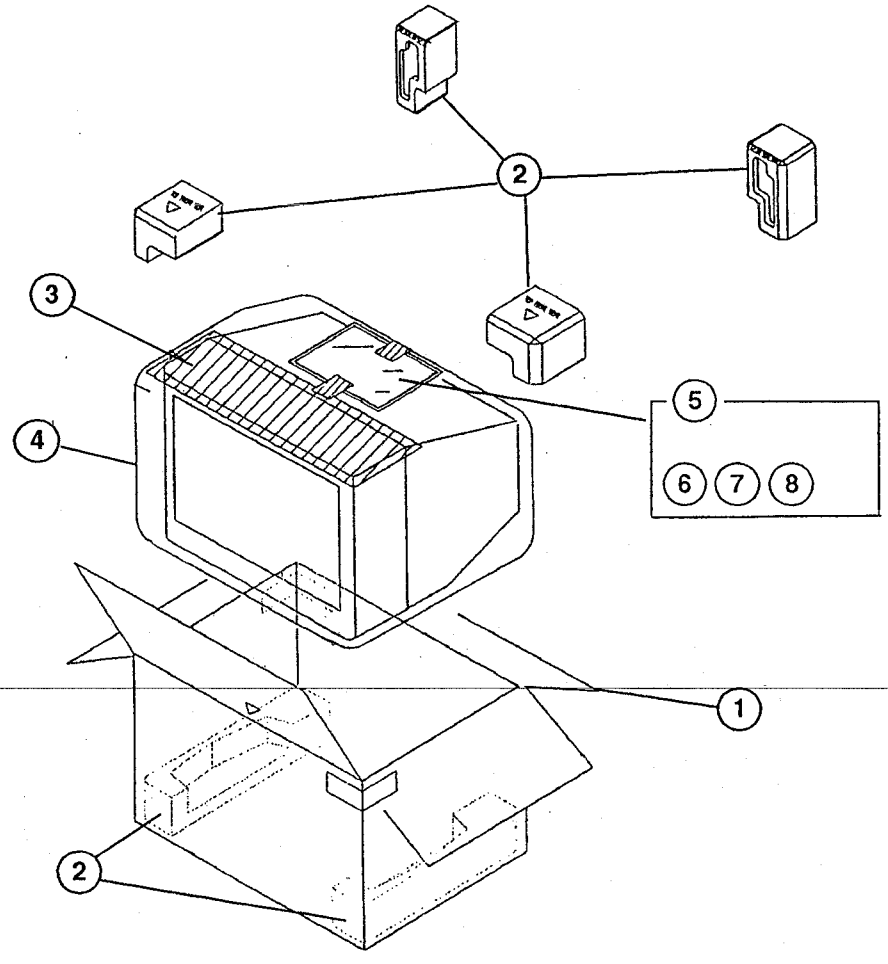
FRONT CONTROL PW BOARD ASS'Y (SFK-4002A-M2)

⚠ Symbol No.	Part No.	Part Name	Description	Local
D I O D E				
D4701	GL2PR6	L.E.D.(RED)		*
T R A N S I S T O R				
Q4701-02	DTA124EKA-X	DIGI.TRANSISTOR		*
I C				
IC4841	PIC-21043SR	IR DETECT UNIT		*
O T H E R S				
	CM46978-A01-H	L.E.D.HOLDER		*
S4702	QSP1A11-C19Z	PUSH SWITCH	MENU	*
S4703	QSP1A11-C19Z	PUSH SWITCH	CH -	*
S4704	QSP1A11-C19Z	PUSH SWITCH	CH +	*
S4705	QSP1A11-C19Z	PUSH SWITCH	VOL -	*
S4706	QSP1A11-C19Z	PUSH SWITCH	VOL +	*
S4707	QSP1A11-C19Z	PUSH SWITCH	POWER	*

AV SELECTOR PW BOARD ASS'Y (SFK-8002A-M2)

⚠ Symbol No.	Part No.	Part Name	Description			Local
C A P A C I T O R						
C8205	NCT03CH-330AY	CHIP CAP.	33 p F	50V	J	*
C8302	QFLC1HJ-103MZ	M CAP.	0.01 µ F	50V	J	*
C8303	NCT03CH-680AY	CHIP CAP.	68 p F	50V	J	*
C8304	NCT03CH-271AY	CHIP CAP.	270 p F	50V	J	*
C8305	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
C8316	NCB21HK-103AY	CHIP CAP.	0.01 µ F	50V	K	*
C8832	QFLC1HJ-103MZ	M CAP.	0.01 µ F	50V	J	*
C O I L						
L8202	CELP059-220Z	PEAKING COIL	22 µ H			*
L8301	CELP059-150Z	PEAKING COIL	15 µ H			*
L8801	CELP059-5R6Z	PEAKING COIL	5.6 µ H			*
D I O D E						
D8311-13	1SS133-T2	SI.DIODE				*
D8811-18	MTZJ9.1(C)-T2	ZENER DIODE				*
T R A N S I S T O R						
Q8202	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8203	2SA1037K(QR)-X	SI.TRANSISTOR				*
Q8204	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8301-03	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8305-06	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8801	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8804-05	2SC2412K(QR)-X	SI.TRANSISTOR				*
Q8851-53	DTC124EKA-X	DIGI.TRANSISTOR				*
I C						
IC8801	BA7644AN	OP AMP IC				*
IC8803	TC4066BP	I.C.(DIGI-MOS)				*
O T H E R S						
CM8201	CE42599-001	COMB FILTER MOD				*
DL8201	CE42464-001	BPF&DL MODULE				*
J8801	QMCC004-C01	MINI DIN JACK				
J8802	QNN0084-001	PIN JACK				*

PACKING



PACKING PARTS LIST

⚠	Ref.No.	Part No.	Part Name	Description	Local
	1	CP11499-A18-A	PACKING CASE		*
	2	CP11606-00B-A	CUSHION ASSY	6pcs in 1set	*
	3	CP30055-002-A	TOP COVER		*
	4	CP30056-004-A	POLY BAG		*
	5	QPGA025-03505A	POLY BAG		
	6	RM-C747-1C	REMOCON UNIT		*
⚠	7	CQ40343-A01-A	INST BOOK		*
	8	BT-51006-1Q	REGISTER CARD		*

JVC
VICTOR COMPANY OF JAPAN, LIMITED
TELEVISION RECEIVER DIVISION 1106 Heta, Iwai-city, Ibaraki-prefecture, 306-06, Japan

Printed in Japan
VP 9707
DP3053

AV-32820[PHILIPPINES] STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1. SAFETY

The components identified by the⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal	:PAL Colour bar signal
(2)Setting positions of each knob/button and variable resistor	:Original setting position when shipped
(3)Internal resistance of tester	:DC 20kΩ/V
(4)Oscilloscope sweeping time	:H ⇒ 20μS/div :V ⇒ 5mS/div :Others ⇒ Sweeping time is specified
(5)Voltage values	:All DC voltage values

∗ Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

●In the PW board :R1209→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

●Resistance value

No unit	:[Ω]
K	:[KΩ]
M	:[MΩ]

●Rated allowable power

No indication	:1/6[W]
Others	:As specified

●Type

No indication	:Ceramic capacitor
MY	:Mylar capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

*Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

●Capacitance value

1 or higher	:[pF]
less than 1	:[μF]

●Withstand voltage

No indication	:DC50[V]
Others	:DC withstand voltage [V]

*Electrolytic Capacitors

47/50[Example]:Capacitance value [μF]/withstand voltage[V]

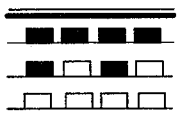
●Type

No indication	:Ceramic capacitor
MY	:Mylar capacitor
MM	:Metalized mylar capacitor
PP	:Polypropylene capacitor
MPP	:Metalized polypropylene capacitor
MF	:Metalized film capacitor
TF	:Thin film capacitor
BP	:Bipolar electrolytic capacitor
TAN	:Tantalum capacitor

(3)Coils

No unit	:[μH]
Others	:As specified

(4)Power Supply



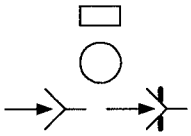
:B1
:B2(12V)
:8V
:5V

*Respective voltage values are indicated

(5)Test point

:Test point
:Only test point display

(6)Connecting method



:Connector
:Wrapping or soldering
:Receptacle

(7)Ground symbol

:LIVE side ground
:ISOLATED(NEUTRAL) side ground
:EARTH ground
:DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇**Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

Jul. 1997 No.51263

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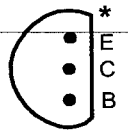
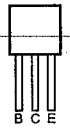
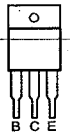
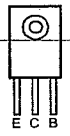
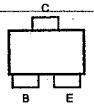
SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				CHIP TR 

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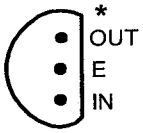
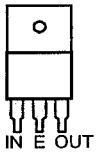
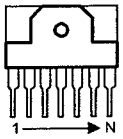
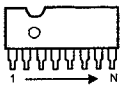
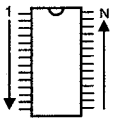
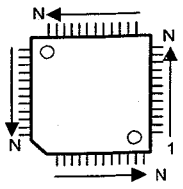
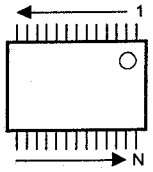
BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

CHIP IC

TOP VIEW		
		

■ CHANNEL CHART (US)

MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
○	○	VL	02		I
			03		
			04		
			05		
			06		
		VH	07		II
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	I
			B	15	
			C	16	II
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	III
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	IV
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	

MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
			W + 35	71	
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
×	○	ULTRA	W + 59	100	IV
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	II
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

TOTAL 180CH
{ VHF 124CH
UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

■ CHANNEL CHART (CA)

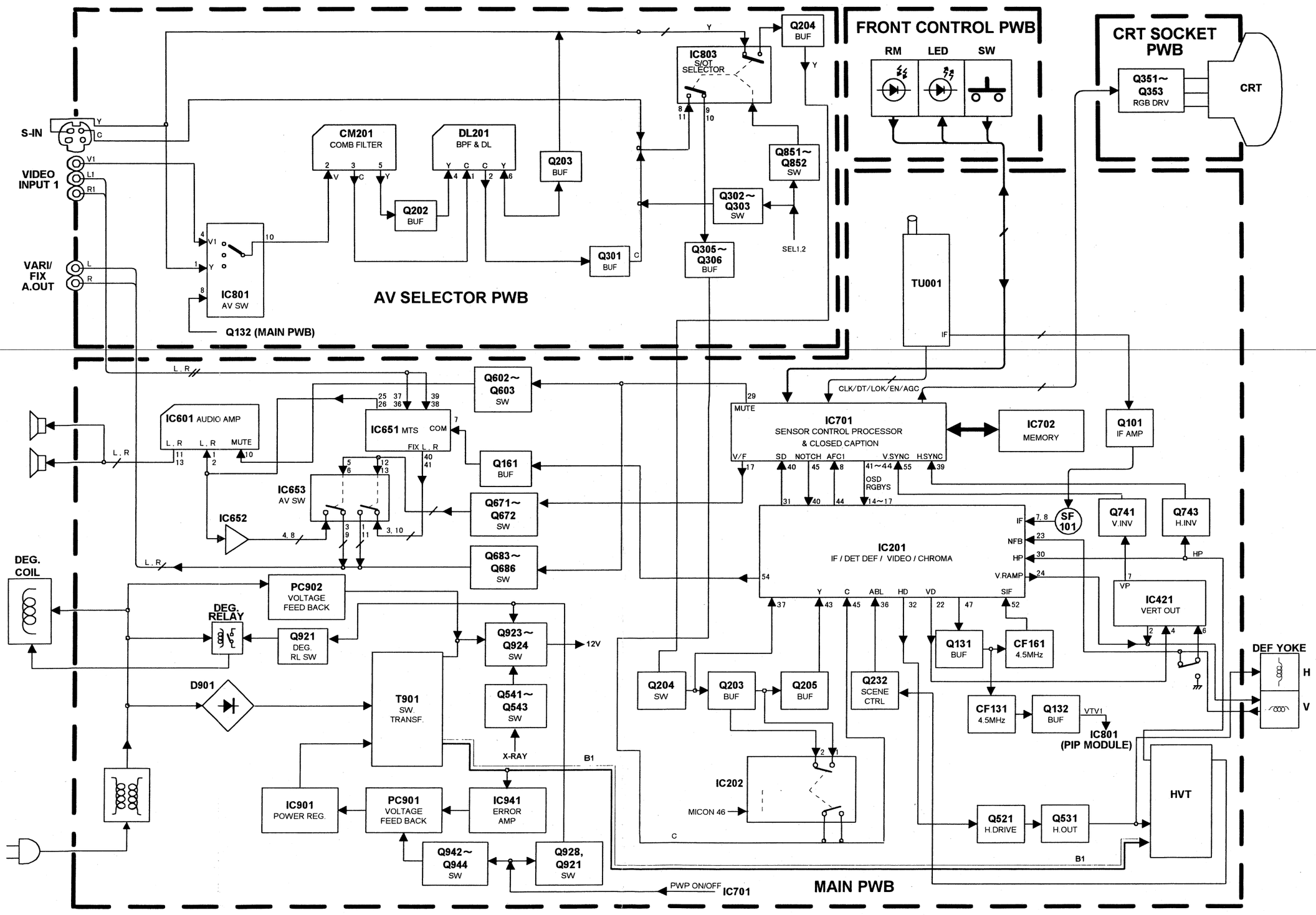
MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
○	○	VL	02		I
			03		
			04		
			05		
			06		
		VH	07		II
			08		
			09		
			10		
			11		
			12		
			13		
×	○	MID	A	14	II
			B	15	
			C	16	
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	III
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	

MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
			W + 35	71	
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
×	○	ULTRA	W + 59	100	IV
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	II
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

TOTAL 180CH
{ VHF 124CH
UHF 56CH

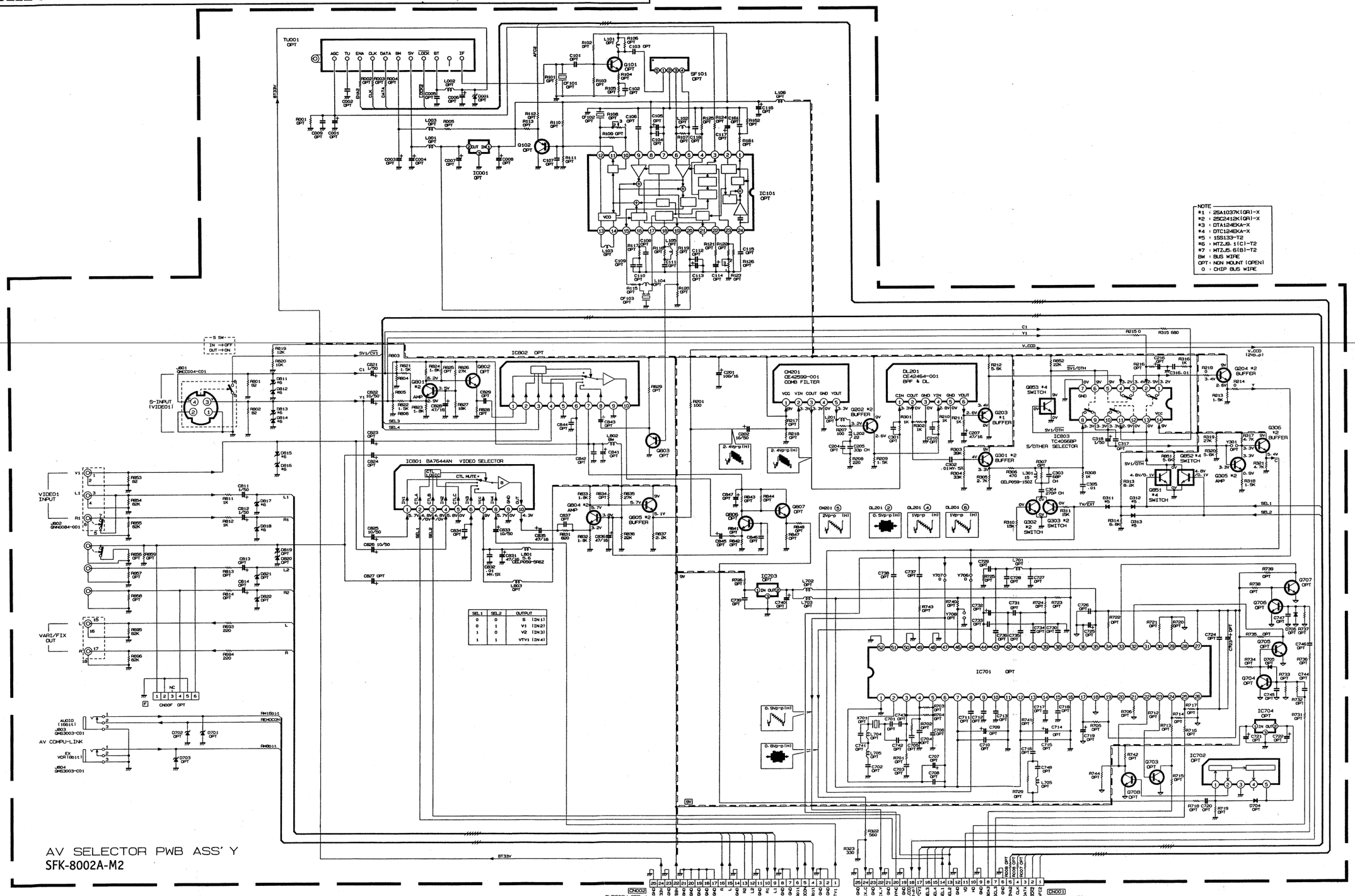
NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES.
SPECIAL ADAPTERS MAY BE REQUIRED.

BLOCK DIAGRAM



CIRCUIT DIAGRAMS AND PWB PATTERNS

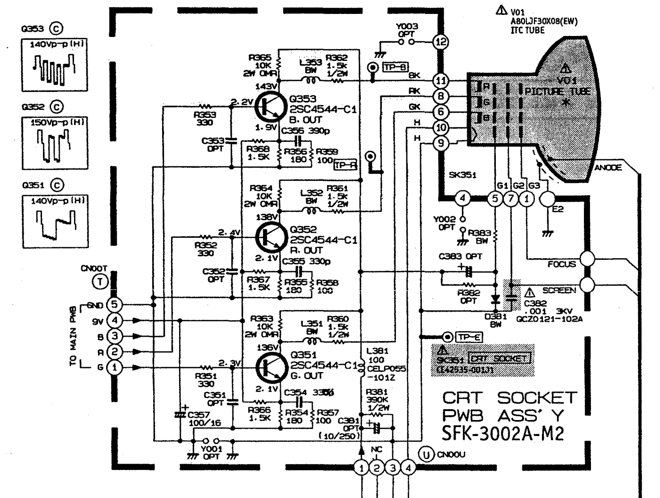
AV SELECTOR PWB CIRCUIT DIAGRAM



SEL-1	SEL-2	OUTPUT
0	0	S (IN1)
0	1	V1 (IN2)
1	0	V2 (IN3)
1	1	VTV1 (IN4)

AV SELECTOR PWB ASS'Y
SFK-8002A-M2

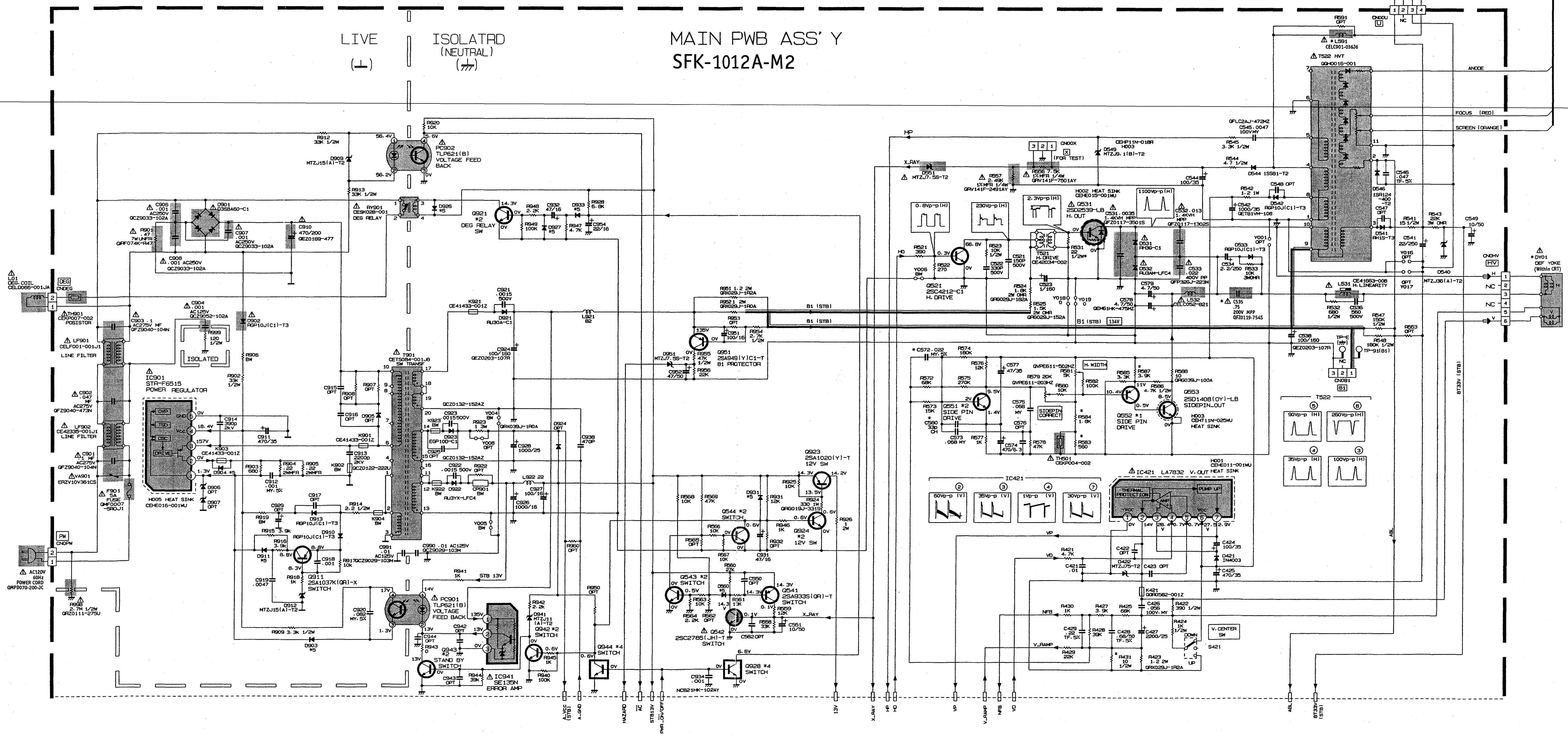
MAIN PWB AND CRT SOCKET PWB CIRCUIT DIAGRAM



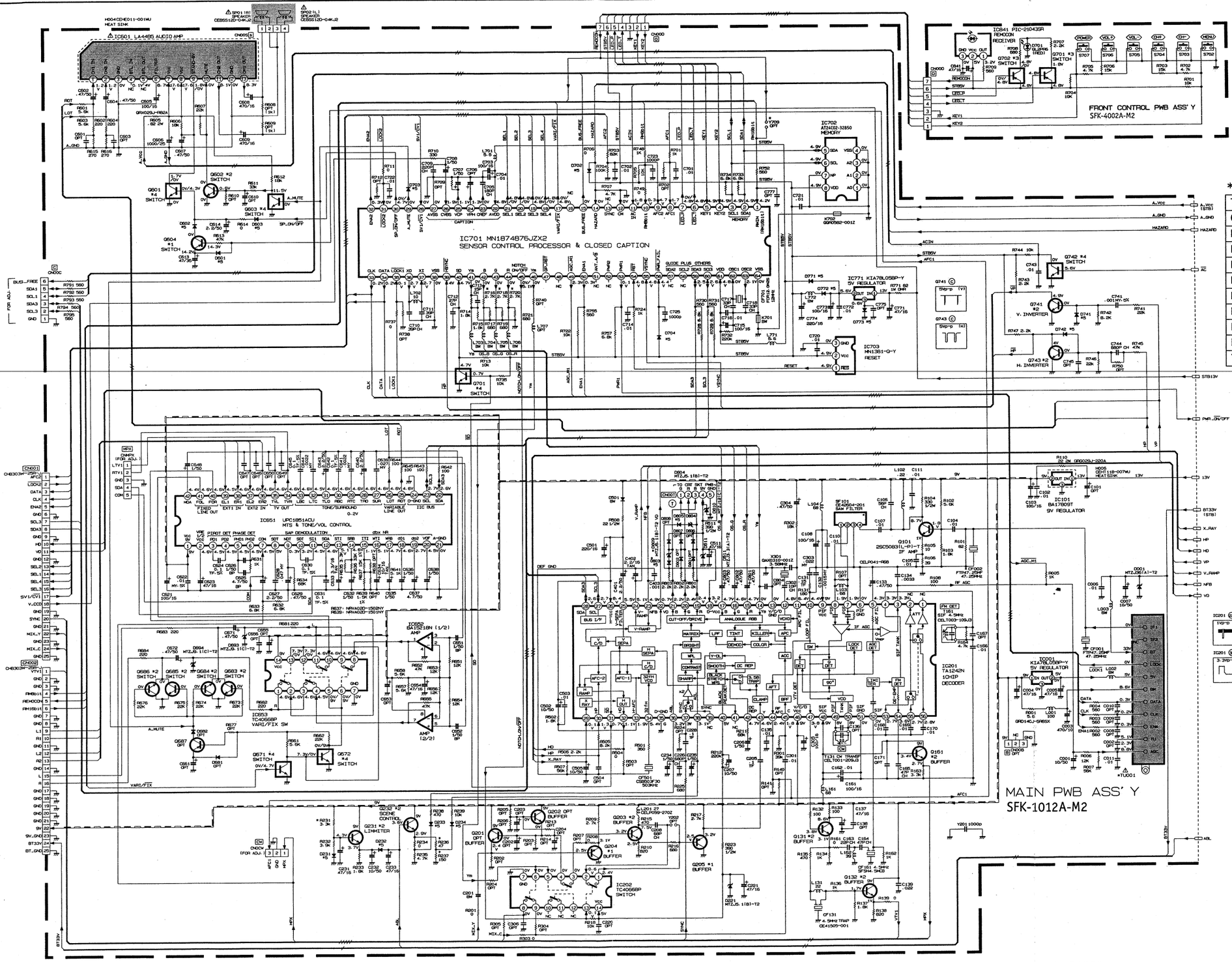
*REFFERENCE LIST (*PARTS)

V01 ⚠	A80LJF30X08-EW
DY01 ⚠	ITC
R431	OPT
R583	1.8K
R584	1.5K
R587	3.3K
C535 ⚠	QFZ0119-754S
C572	OPT
C580	OPT
L591 ⚠	CELC901-036J6
LF902 ⚠	CELF008-001J5

NOTE
- *1 : 2SA1037K(QR)-X
- *2 : 2SC2412K(QR)-X
- *3 : DTA124EKA-X
- *4 : DTC124EKA-X
- *5 : 1SS133-T2
- *6 : MTZJ9.1(C)-T2
- *7 : MTZJ5.6(B)-T2
- BW : BUS WIRE
- OPT : NON MOUNT (OPEN)
- O : CHIP BUS WIRE


LIVE
(⊥)
ISOLATRD
(NEUTRAL)
MAIN PWB ASS' Y
SFK-1012A-M2
IC901 STR-F6515 POWER REGULATOR
PC902 TLP621(B) VOLTAGE FEED BACK
PC901 TLP621(B) VOLTAGE FEED BACK
RY901 CESK028-001 DEG RELAY
T901 CETS084-001J8 SW TRANSF
IC941 SE135N ERROR AMP
Q951 2SA949(Y)C1-T B1 PROTECTOR
Q521 2SC4212-C1 H. DRIVE
Q531 2SD2539-LB H. OUT
T522 HVT
Q552 SIDE PIN DRIVE
Q553 2SD1408(OY)-LB SIDEPIN_OUT
IC421 LA7832 V. OUT
THERMAL PROTECTION
PUMP UP
DY01 DEF YOKE (Within CRT)
AC120V 60Hz POWER CORD
LINE FILTER
ISOLATED
V. CENTER SW
H. WIDTH
SIDEPIN CORRECT
H. LINEARITY
A_VCC (STB)
A_GND
HAZARD
AC
STB13V
PWR_ON/OFF
13V
X_RAY
HP
HD
VP
V_RAMP
NFB
VD
ABL
BT33V (STB)

MAIN PWB AND FRONT CONTROL PWB CIRCUIT DIAGRAM



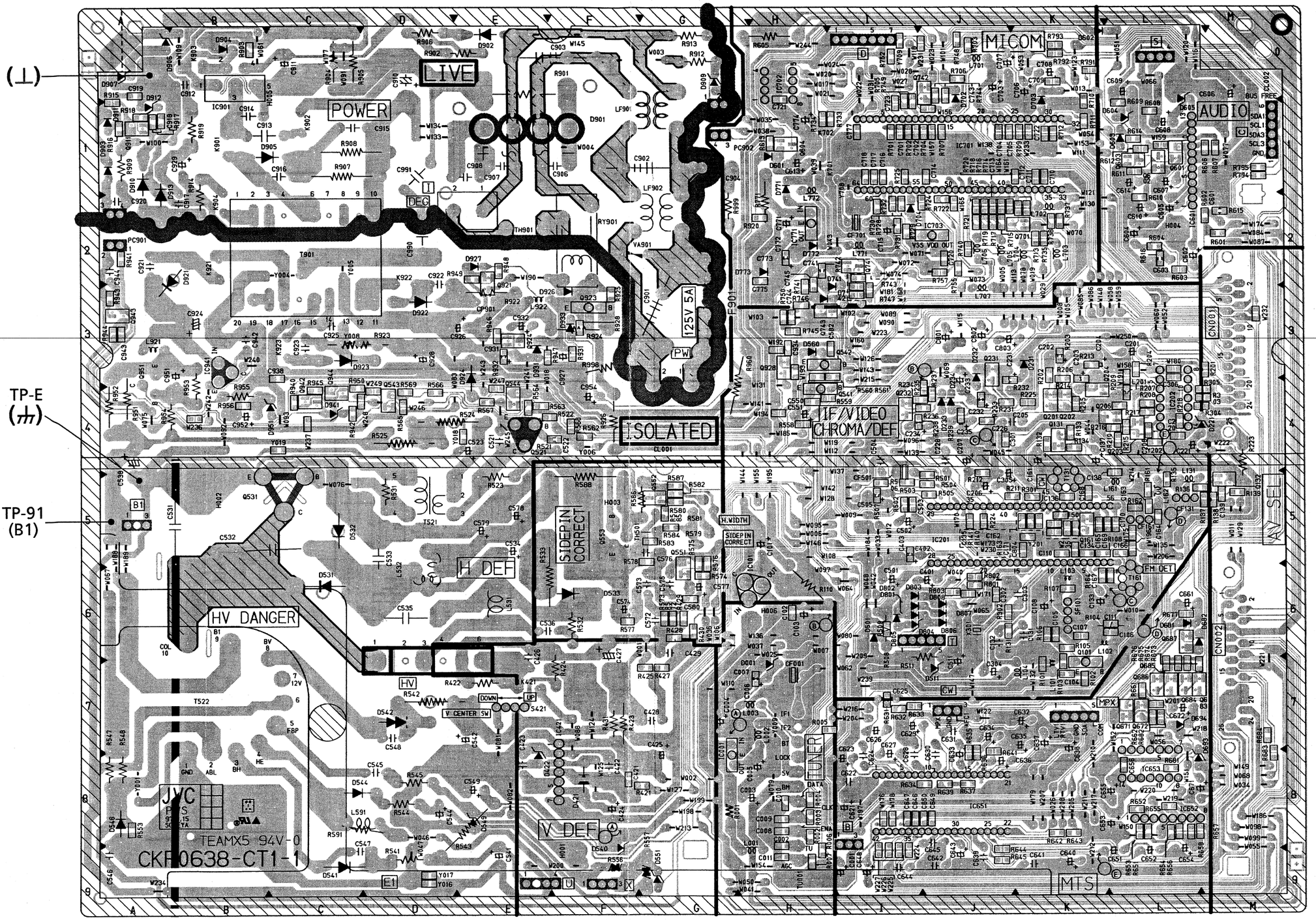
* REFFERENCE LIST (*PARTS)

TU001 ⚠	CEEY200-B01
CF002	FTP 47.25MF
R231	3.3K
R236	47
R237	150
R716	2.7K
R718	2.7K
R720	2.7K
D803	* 5
D809	MTZJ5.1(B)-T2
Y709	OPT

MAIN PWB PATTERN

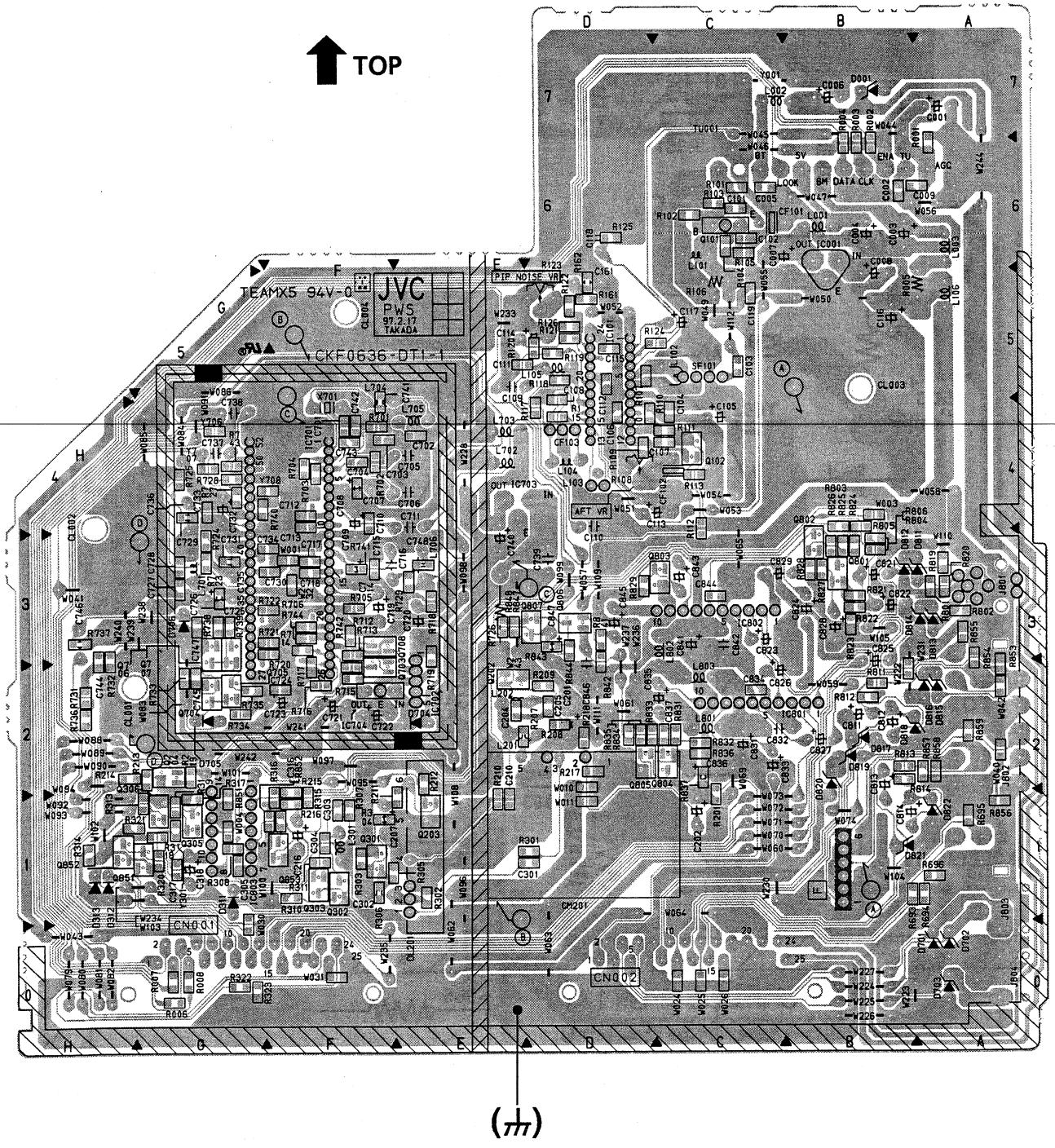
FRONT

(Magnification Rate 95%)



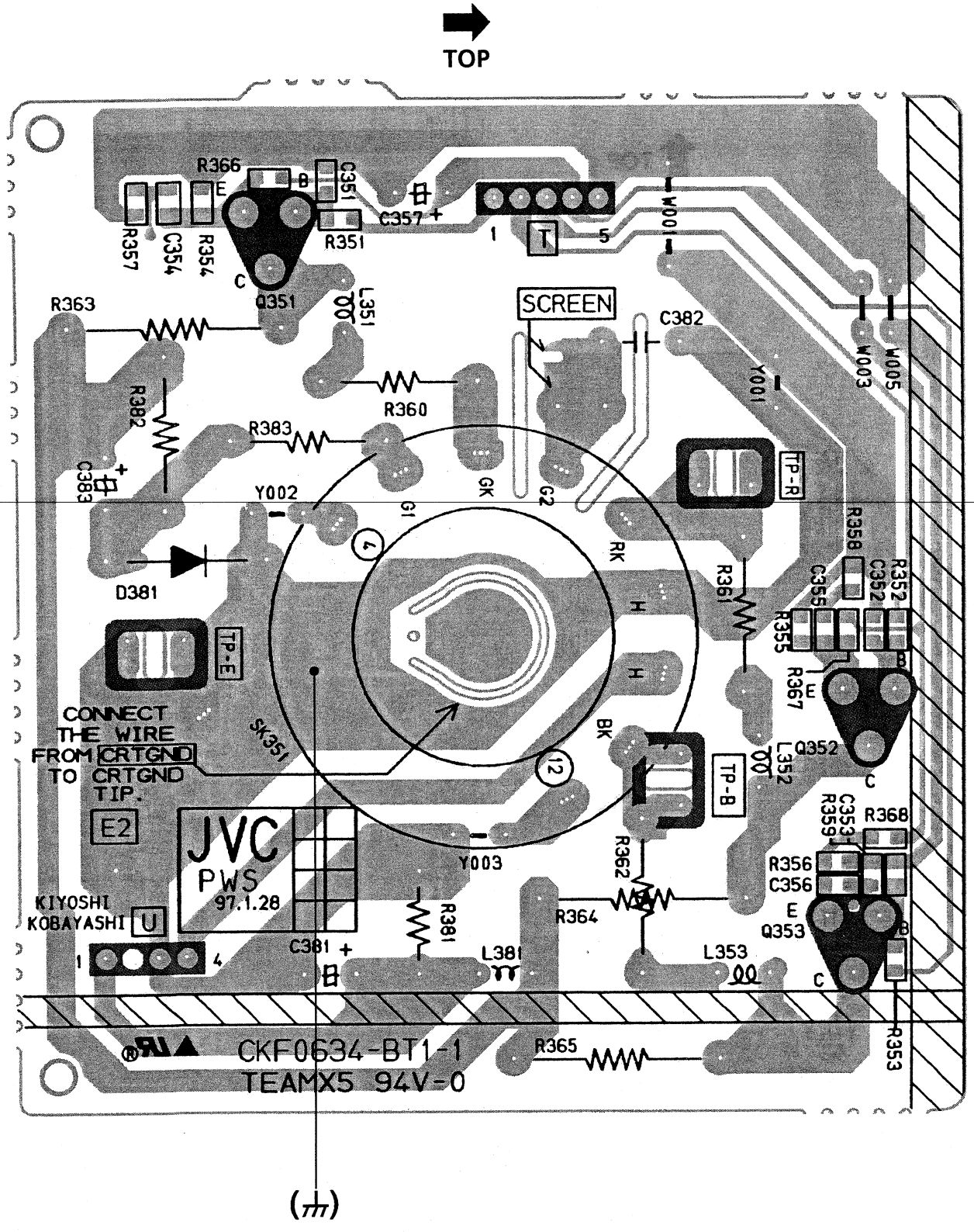
AV SELECTOR PWB PATTERN

(Magnification Rate 86%)



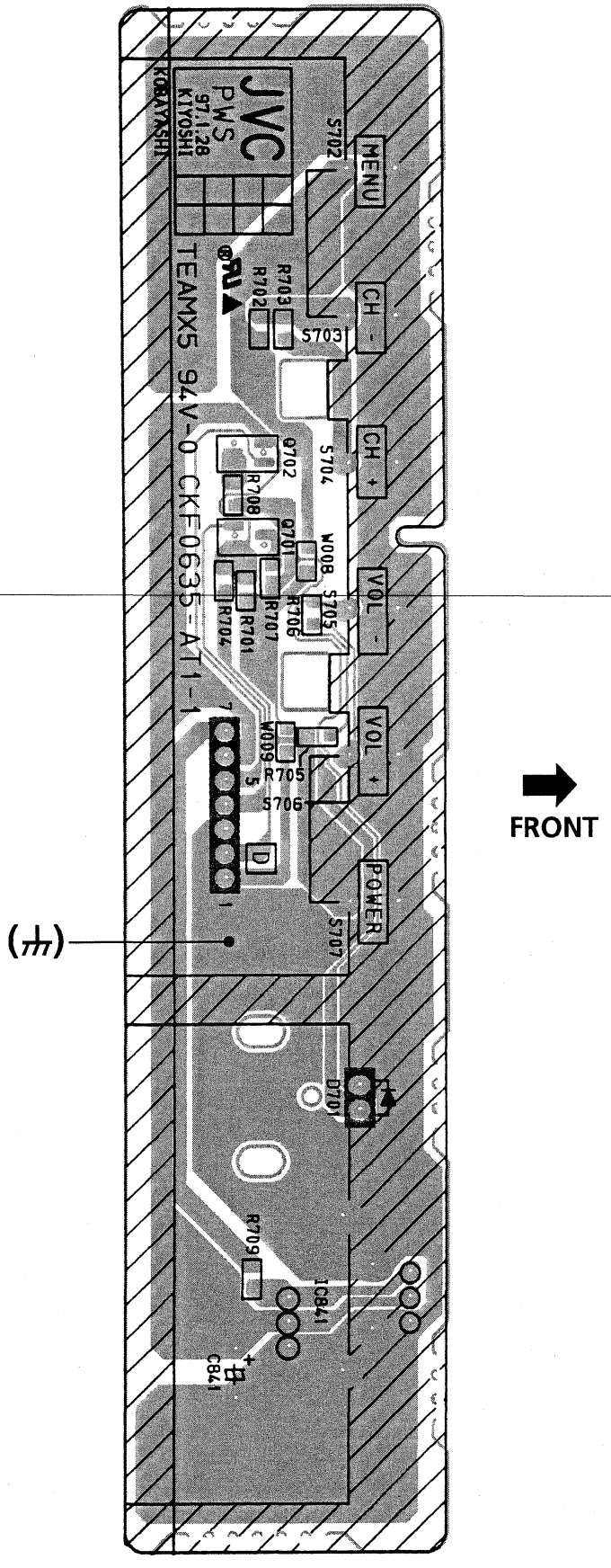
CRT SOCKET PWB PATTERN

(Magnification Rate 180%)



FRONT CONTROL PWB PATTERN

(Magnification Rate 143%)



AV-32820
AV-32850
AV-32870

2882

JVC

Manual Change Information

SERVICE MANUAL

COLOR TELEVISION

BASIC CHASSIS
FK

AV-32820(US&CA)
AV-32850(US&CA)
AV-32870(US&CA)

Since some details of the AV-32820(US&CA), AV-32850(US&CA) and AV-32870(US&CA) service manual (No.51212, Apr. 1997) were incorrect, we are informing you of these errors and of the correct descriptions.

CORRECT ITEMS

SPECIFICATIONS (page 2)

CORRECTION
Mass

Item	AV-32820(US&C
Dimensions (W × H × D)	768mm × 667mm × 547 30-1/4" × 26-1/4" × 21
~~Weight~~	51.0 kg 112.5 lbs
Reception Format	

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No. 51212B
May 1997

AV-32820
AV-32850
AV-32870

SPECIFICATIONS (page 2)

CORRECTION (1, 2)

Audio Power Output	3W + 3W
External Input ~~(1, 2, 3)~~	
Video Input	1Vp-p, 75Ω
Audio Input	500mVrms (-4dBs), High impedance
S-Video Input	ADDITION
Audio Output (Vari / Fix : Selectable)	More than 0 to 1550mVrms (+6dBs), Low impedance (400 Hz when modulated 100
AV Compu Link Ex	3.5mm mini jack × 2
Speakers	~~3-3/16"~~ × 4-3/4", ~~8cm~~ × 12cm Oval Type

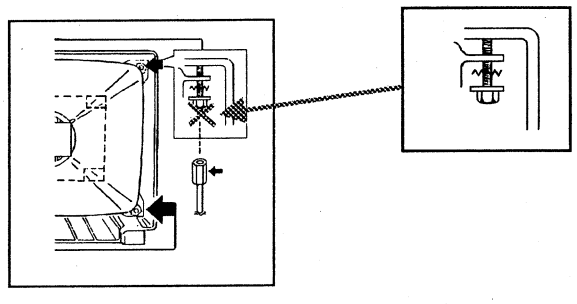
CORRECTION 2"

CORRECTION 5cm

SPECIFIC SERVICE INSTRUCTIONS (page 7)

CORRECTION screws

3. Remove 4 ~~nuts~~ marked by arrows with a box type screw driver as shown in Fig.4.
   - Since the cabinet will drop when ~~nuts~~ have been removed, be sure to support the cabinet with hands.
4. After 4 ~~nuts~~ have been removed, put the cabinet slowly on cloth (At this time, be carefully so as not to damage the front surface of the cabinet) shown in Fig.5.



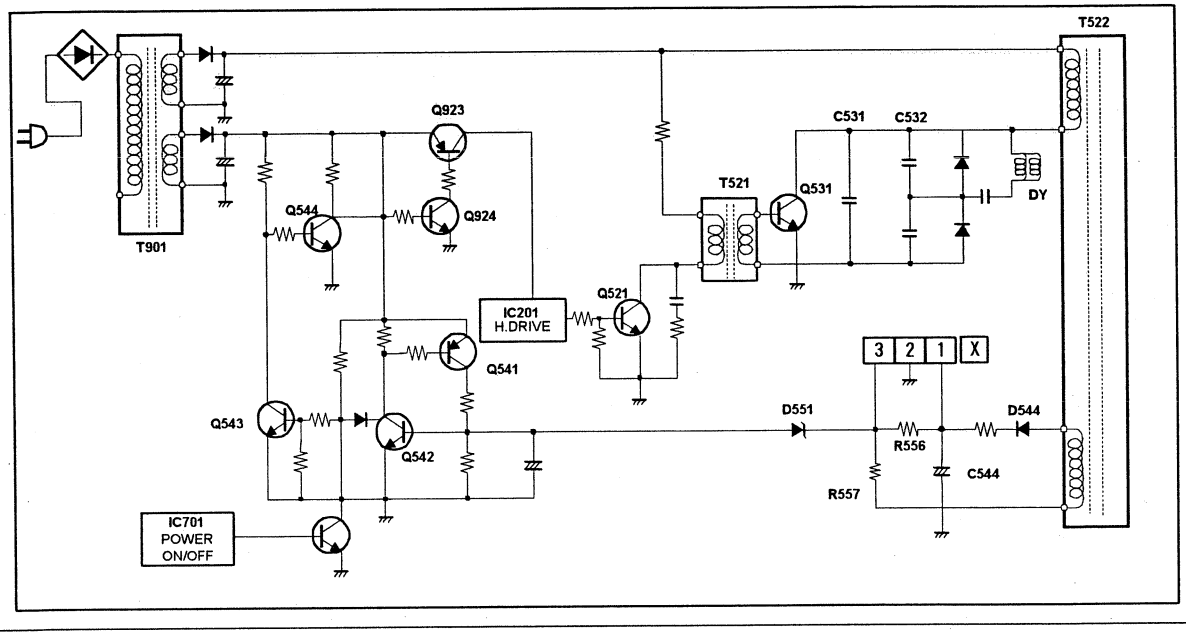
ADJUSTMENT (page 18)

B1 VOLTAGE CHECK

Item	Measuring instrument	Test point	Adjustment item	Description
B1 Voltage check	DC Voltmeter	B1 (B1 Connector 1 pin) (TP-91) TP-E(⏚) (B1 Connector 3 pin)		1. Input a black and white signal (color off). 2. Connect the DC voltmeter to B1 connector 1 pin (TP-91) and TP-E(⏚) (B1 connector 3 pin). 3. Confirm that the voltage is ~~DC135V±3V.~~ CORRECTION DC134±2V

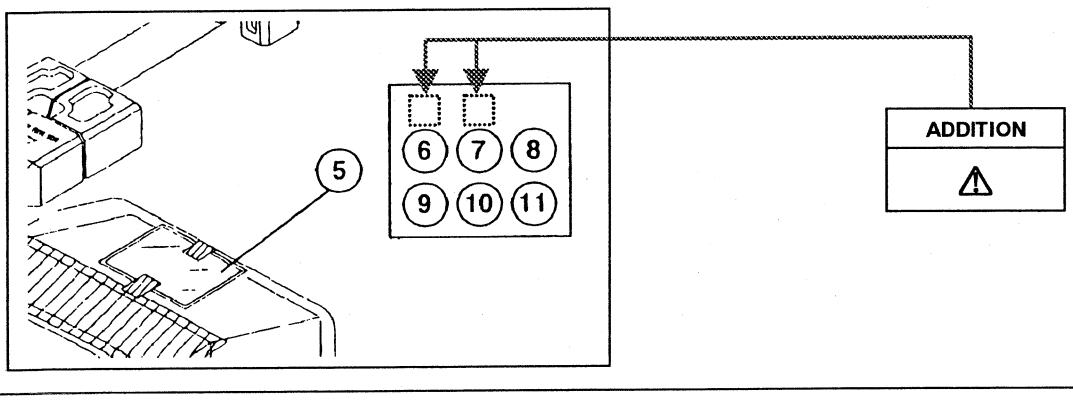
HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT (page 27)

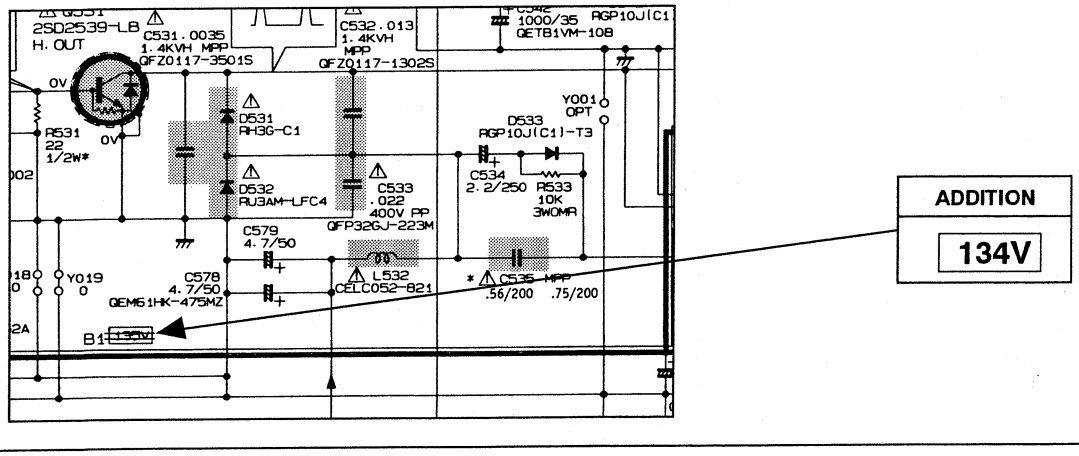
Change the Fig.1 to following figure.



PARTS LIST

PACKING (page 57)



STANDARD CIRCUIT DIAGRAM

MAIN PWB AND CRT SOCKET PWB CRICUIT DIAGRAMS (page 2-18)